

Super Fast Recovery Diodes High frequency rectifying

Single

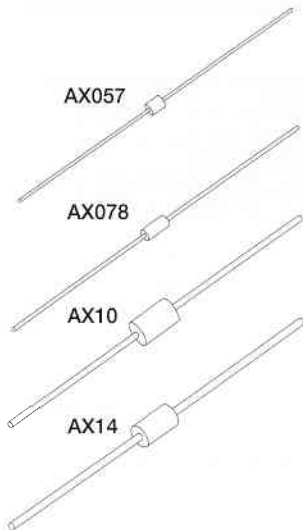
Surface Mount



Type No.	Absolute Maximum Ratings						Electrical Characteristics							Outline		
	VRM [V]	I _o [A]	Conditions T _c [°C]	IFSM [A]	Tstg [°C]	T _j [°C]	V _F (max) [V]	Conditions I _F [A]	I _R (max) V _R =V _{RM} [μA]	trr (max) [ns]	θ _{jI} (max) [°C/W]	θ _{ja} (max) [°C/W]	θ _{jc} (max) [°C/W]	Package	Fig.	
M1FL20U	200	1.1	25*1	30	-55 to 150	150	0.98	1.1	10	35	20	108	—	M1F	12	
D1FL20U		1.1	25*1	20	-55 to 150	150	0.98	1.1	10	35	23	108	—	1F	13-1	
☆M2FL20U		1.5	32*1	50	-55 to 150	150	0.92	1.5	10	35	33	90	—	M2F	15-1	
☆M3FL20U		3	75*2	75	-55 to 150	150	0.95	3	10	35	25	110	—	M2F	15-1	
D2FL20U		1.5	25*1	50	-55 to 150	150	0.98	1.5	10	35	24	90	—	2F	16-1	
DE3L20U		3	113	60	-55 to 150	150	0.98	3	10	35	—	55	12	E-pack	31-2	
M1FL40		400	1.0	25*1	25	-55 to 150	150	1.3	1	10	50	20	80	18	M1F	12
D1FL40			0.8	25*1	25	-55 to 150	150	1.3	0.8	10	50	23	108	—	1F	13-1
D2FL40			1.3	25*1	40	-40 to 150	150	1.3	1.3	10	50	24	90	—	2F	16-1
DE3L40			3	99	50	-55 to 150	150	1.3	3	10	50	—	55	12	E-pack	31-2
☆D1FK60	0.8		29*1	20	-55 to 150	150	1.3	0.8	10	75	23	108	—	1F	13-1	
☆D2FK60	1.5		101*2	40	-55 to 150	150	1.3	1.5	10	75	24	90	—	2F	16-1	
DE5L60	600	5	57	60	-55 to 150	150	2	5	10	50	—	125	12	E-pack	31-2	
★DF8L60US		8	*3	*3	-55 to 150	150	3.6	8	50	25	—	—	*3	STO-220	36-2	
DF10L60		10	105	100	-55 to 150	150	1.9	10	10	50	—	—	2	STO-220	36-2	
DF20L60		20	84	170	-55 to 150	150	1.9	20	25	70	—	—	1.5	STO-220	36-2	
DF20L60U		20	93	160	-55 to 150	150	3.0	20	25	35	—	—	0.9	STO-220	36-2	
☆D1FK70		700	0.8	32*1	25	-55 to 150	150	1.3	0.8	10	400	23	108	—	1F	13-1

☆: New product * 1: T_a * 2: T_I * 3: Under evaluation
★: Under development

Axial



Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline		
	VRM [V]	I _o [A]	Conditions T _a [°C]	IFSM [A]	Tstg [°C]	T _j [°C]	V _F (max) [V]	Conditions I _F [A]	I _R (max) V _R =V _{RM} [μA]	trr (max) [ns]	θ _{jI} (max) [°C/W]	θ _{ja} (max) [°C/W]	Package	Color Code	Fig.
D1NL20U*2	200	1	25	25	-55 to 150	150	0.98	1	10	35	10	113	AX057	—	1
D2L20U*3		1.5	125*1	40	-40 to 150	150	0.98	1.5	10	35	17	105	AX078	Red	5-1
S2L20U*2		1.5	25	50	-40 to 150	150	0.98	1.5	10	35	12	83	AX10	Red	6-1
S3L20U*2		3	128*1	60	-40 to 150	150	0.98	2.1	10	35	6.5	60	AX14	Red	8
D1NL40*2		0.9	25	25	-55 to 150	150	1.3	0.9	10	50	10	113	AX057	—	1
S2L40*2		1.1	25	40	-55 to 150	150	1.3	1.1	10	50	12	83	AX10	Yellow	6-1
D2L40*3	400	1.5	108*1	40	-55 to 150	150	1.3	1.1	10	50	17	105	AX078	Yellow	5-1
S3L40*2		3	123*1	60	-40 to 150	150	1.3	3	10	50	6.5	60	AX14	Yellow	8
D1NF60*2		0.8	25	50	-55 to 150	150	1.3	0.8	10	400	10	113	AX057	—	1
☆D1NK60*2	600	0.8	26	35	-55 to 150	150	1.3	0.8	10	75	10	113	AX057	—	1
S2L60*2		1.5	125*1	50	-55 to 150	150	1.5	1.5	10	50	12	83	AX10	Blue	6-1
☆S3K60*2		3	123*1	120	-55 to 150	150	1.3	3	10	100	6.5	60	AX14	Blue	8
S3L60*2		2.2	132*1	60	-55 to 150	150	1.5	2.2	10	50	6.5	60	AX14	Blue	8

☆: New product * 1: T_I * 2: Spec Code 5□□□ * 3: Spec Code 7□□□
(See page 44 for the last 3 digits of the Spec Code)

Super Fast Recovery Diodes

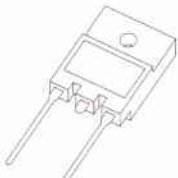
Two Terminal Type



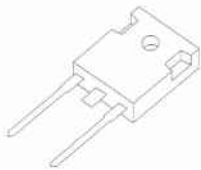
ITO-220



FTO-220



ITO-3P



MTO-3P

Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline	
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
D3L20U	200	2.5	136	45	-40 to 150	150	0.98	2.5	10	35	55	5.0	ITO-220	41
D4L20U		4	130	60	-40 to 150	150	0.98	4	10	35	—	4.5	ITO-220	41
D6L20U		6	118	80	-40 to 150	150	1.1	6	10	35	55	4.2	ITO-220	41
SF6L20U		6	126	80	-40 to 150	150	1.1	6	10	35	—	3.2	FTO-220	47
D10L20U		10	111	120	-40 to 150	150	0.98	10	10	35	—	3.5	ITO-220	41
SF5L30	300	5	130	100	-55 to 150	150	1.3	5	25	30	—	3.4	FTO-220	47
D4L40	400	4	125	60	-40 to 150	150	1.3	4	10	50	—	4.5	ITO-220	41
D3L60	600	3	127	60	-55 to 150	150	1.65	3	10	50	55	4.5	ITO-220	41
SF3L60U		3	115	40	-55 to 150	150	3.0	3	25	20	—	3.8	FTO-220	47
D5L60		5	123	100	-55 to 150	150	1.5	5	10	50	55	3.5	ITO-220	41
SF5L60		5	131	100	-55 to 150	150	1.5	5	10	50	—	2.5	FTO-220	47
SF5L60U		5	96	60	-55 to 150	150	3.0	5	25	25	—	3.6	FTO-220	47
D8L60		8	106	170	-55 to 150	150	1.5	8	25	70	—	3.5	ITO-220	41
SF8L60		8	118	170	-55 to 150	150	1.5	8	25	70	—	2.5	FTO-220	47
☆SF8L60USM		8	57	60	-55 to 150	150	3.6	8	50	25	—	3.0	FTO-220A	49
SF10L60U		10	85	120	-55 to 150	150	3.0	10	25	25	—	2.0	FTO-220	47
S16L60		16	122	300	-55 to 150	150	1.5	16	25	100	—	1.1	MTO-3P	45
SF20L60U	20	68	180	-55 to 150	150	3.0	20	25	35	—	1.3	FTO-220	47	
S20L60	20	119	400	-55 to 150	150	1.5	20	25	100	—	0.9	MTO-3P	45	
S30L60	30	117	600	-55 to 150	150	1.5	30	25	150	—	0.7	MTO-3P	45	
D30L60	30	85	600	-55 to 150	150	1.5	30	25	150	—	1.4	ITO-3P	43	

☆: New product

Center Tap, Common Cathode

Surface Mount



E-pack

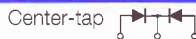


STO-220


Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline	
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
DE5LC20U	200	5	81	50	-55 to 150	150	0.98	2.5	10	35	55	12	E-pack	31-1
DF10LC20U		10	127	80	-40 to 150	150	0.98	5	10	35	—	2	STO-220	36-1
DF20LC20U		20	114	140	-40 to 150	150	0.98	10	10	35	—	1.6	STO-220	36-1
☆DF10LC30	300	10	124	80	-55 to 150	150	1.3	5	25	30	—	2	STO-220	36-1
★DF10LC30S		10	122	100	-55 to 150	150	1.3	5	25	30	—	2	STO-220	36-1
DF20LC30		20	124	180	-55 to 150	150	1.3	10	25	30	—	1	STO-220	36-1
★DF20LC30S		20	105	160	-55 to 150	150	1.3	10	25	30	—	1	STO-220	36-1
DE5LC40	400	5	61	50	-55 to 150	150	1.3	2.5	10	50	55	12	E-pack	31-1

☆: New product

★: Under development

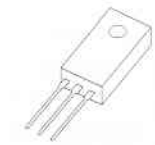


Three Terminal Type

Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline		
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θjl (max) [°C/W]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
 ITO-220	200	5	132	45	-40 to 150	150	0.98	2.5	10	35	50	3.3	ITO-220	42-1	
SF5LC20U		5	137	45	-40 to 150	150	0.98	2.5	10	35	—	2.3	FTO-220	48-1	
D8LC20U		8	122	60	-40 to 150	150	0.98	4	10	35	50	3.3	ITO-220	42-1	
D10LC20U		10	114	80	-40 to 150	150	0.98	5	10	35	50	3.3	ITO-220	42-1	
SF10LC20U		10	124	80	-40 to 150	150	0.98	5	10	35	—	2.3	FTO-220	48-1	
D15LC20U		15	104	110	-40 to 150	150	0.98	7.5	10	35	—	2.8	ITO-220	42-1	
S20LC20U		20	123	140	-40 to 150	150	0.98	10	10	35	—	1.2	MTO-3P	46-1	
D20LC20U		20	112	150	-40 to 150	150	0.98	10	10	35	—	1.7	ITO-3P	44-1	
SF5LC30	300	5	131	60	-55 to 150	150	1.3	2.5	25	30	—	2.8	FTO-220	48-1	
☆SF10LC30SM		10	119	80	-55 to 150	150	1.3	5	25	25	—	2.3	FTO-220A	50-1	
☆SF20LC30SM		20	97	140	-55 to 150	150	1.3	10	25	25	—	2.0	FTO-220A	50-1	
SF20LC30		20	112	180	-55 to 150	150	1.3	10	25	30	—	1.5	FTO-220	48-1	
S20LC30	400	20	119	180	-55 to 150	150	1.3	10	25	30	—	1.2	MTO-3P	46-1	
D5LC40		5	125	50	-40 to 150	150	1.3	2.5	10	50	50	3.3	ITO-220	42-1	
SF5LC40		5	133	50	-40 to 150	150	1.3	2.5	10	50	—	2.3	FTO-220	48-1	
D8LC40		8	114	60	-40 to 150	150	1.3	4	10	50	50	3.3	ITO-220	42-1	
D10LC40		10	100	80	-40 to 150	150	1.3	5	10	50	50	3.3	ITO-220	42-1	
SF10LC40		10	115	80	-40 to 150	150	1.3	5	10	50	—	2.3	FTO-220	48-1	
☆SF20LC40M		20	94	120	-55 to 150	150	1.3	10	10	50	—	2	FTO-220A	50-1	
S20LC40		20	116	120	-40 to 150	150	1.3	10	10	50	—	1.2	MTO-3P	46-1	
D20LC40	600	20	102	120	-40 to 150	150	1.3	10	10	50	—	1.7	ITO-3P	44-1	
☆S20LC60US		20	63	60	-55 to 150	150	3.6	10	50	25	—	1.0	MTO-3P	46-1	
☆S60L120	1200	60	40	450	-55 to 150	150	2.7	60	100	200	—	0.55	MTO-3P	46-3	

☆: New product

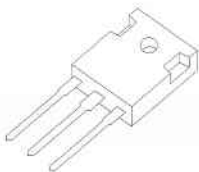
Center-tap



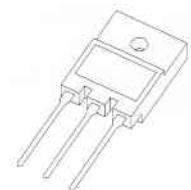
ITO-220



FTO-220/FTO-220A



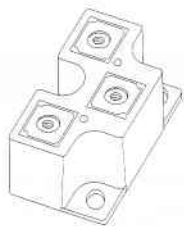
MTO-3P



ITO-3P

Super FRD Module

Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline		
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θjl (max) [°C/W]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
D120LC40	400	120	95	650	-40 to 150	150	1.3	60	25	100	—	—	0.31	Module	79-2
D120LC40B			60										0.5		78
D200LC40B		200	52	1400				100	50	150	—	—	0.35		79-2
D240LC40		240	77					120	0.2						

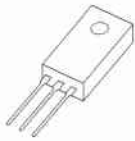


Module

Super Fast Recovery Diodes High frequency rectifying

Center Tap, Common Anode

Three Terminal Type



ITO-220

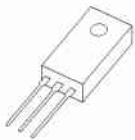
Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline	
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
D5LC20UR	200	5	132	45	-40 to 150	150	0.98	2.5	10	35	50	3.3	ITO-220	42-2
D8LC20UR	200	8	122	60	-40 to 150	150	0.98	4	10	35	50	3.3	ITO-220	42-2
D10LC20UR	200	10	114	80	-40 to 150	150	0.98	5	10	35	50	3.3	ITO-220	42-2

Center-tap(R)

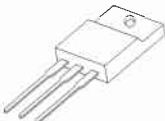


Doubler

Three Terminal Type



ITO-220



FTO-220A

Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline	
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
D5LD20U	200	5	132	45	-40 to 150	150	0.98	2.5	10	35	50	3.3	ITO-220	42-3
D8LD20U	200	8	122	60	-40 to 150	150	0.98	4	10	35	50	3.3	ITO-220	42-3
D8LD40	400	8	114	60	-40 to 150	150	1.3	4	10	50	50	3.3	ITO-220	42-3
☆SF6LD60M	600	6	136	60	-55 to 150	150	1.65	3	10	50	—	2.3	FTO-220A	50-3

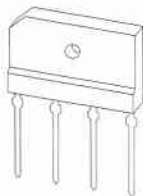
☆: New products

Doubler type



Super Fast Recovery Diode Bridges

Single Inline Package



3S

Type No.	Absolute Maximum Ratings						Electrical Characteristics						Outline		
	VRM [V]	Io [A]	Conditions Tc [°C]	IFSM [A]	Tstg [°C]	Tj [°C]	VF (max) [V]	Conditions IF [A]	IR (max) VR=VRM [μA]	trr (max) [ns]	θjl (max) [°C/W]	θja (max) [°C/W]	θjc (max) [°C/W]	Package	Fig.
D4SBL20U	200	4	108	60	-55 to 150	150	0.98	2	10	35	6	30	5.5	3S	57
D4SBL40	400	4	91	50	-55 to 150	150	1.3	2.5	10	50	6	30	5.5		