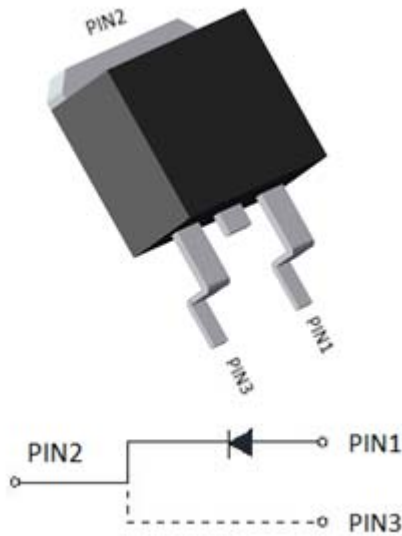


Ultra-Fast Recovery Diodes 75A FRED



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-263
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings ($T_j=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURB7560L
Device marking code			MURB7560L
Repetitive Peak Reverse Voltage	V_{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T_c (FIG.1)	I_O	A	75
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_j=25^\circ\text{C}$	I_{FSM}	A	400
Current Squared Time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$,	I^2t	A ² s	664
Storage Temperature	T_{stg}	°C	-55 ~ +175
Junction Temperature	T_j	°C	-55 ~ +175
Junction capacitance @4V,1MHz	C_j	pF	184



MURB7560L-F2-W5038HF

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=75.0A$ @ $T_J=25^{\circ}C$	-	2.0	2.4
			$I_{FM}=75.0A$ @ $T_J=125^{\circ}C$		1.7	2.1
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	$V_{RM}=V_{RRM}$ $T_J=25^{\circ}C$	-	-	5.0
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_J=125^{\circ}C$	-	-	200
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_J=25^{\circ}C$	-	33	50
			$T_J=25^{\circ}C$	-	47.7	-
			$T_J=125^{\circ}C$	-	59.4	-
Peak recovery current	I_{RRM}	A	$T_J=25^{\circ}C$	-	11.7	-
			$T_J=125^{\circ}C$	-	27.9	-
Reverse recovery charge	Q_{rr}	nC	$T_J=25^{\circ}C$	-	252	-
			$T_J=125^{\circ}C$	-	1117	-

■Thermal Characteristics ($T_J=25^{\circ}C$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURB7560L
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}C/W$	1.0
	Between junction and Air	$R_{\theta J-A}$	$^{\circ}C/W$	40

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURB7560L	Approximate 1.43	800	1600	8000	Reel



MURB7560L-F2-W5038HF

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

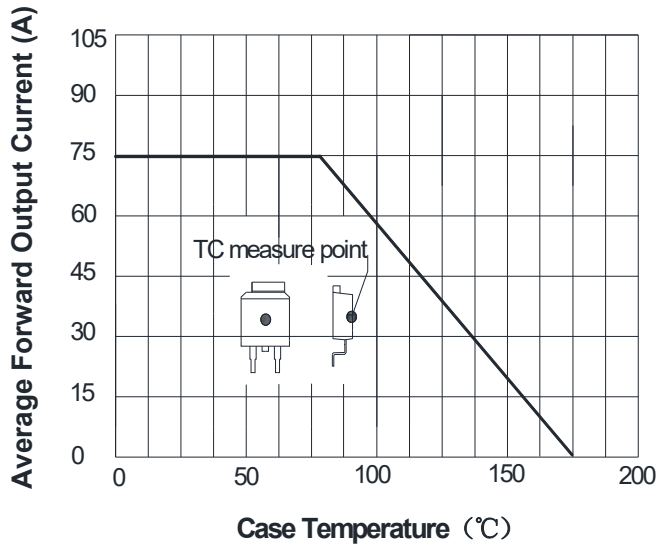


FIG2: Surge Forward Current Capability

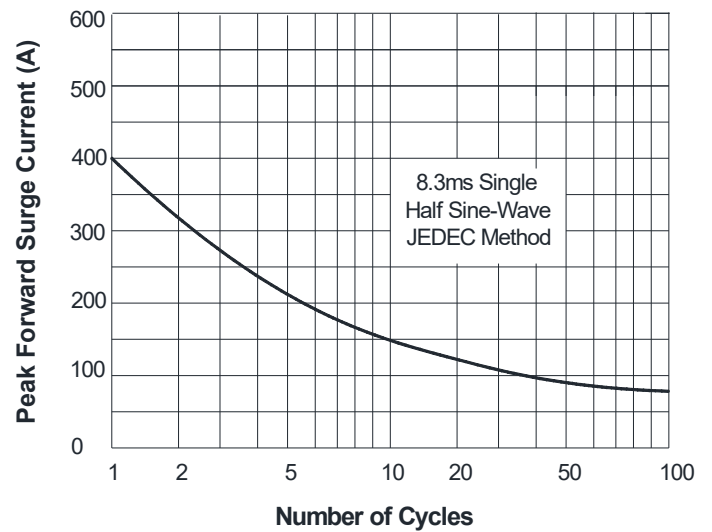


FIG3: Forward Voltage

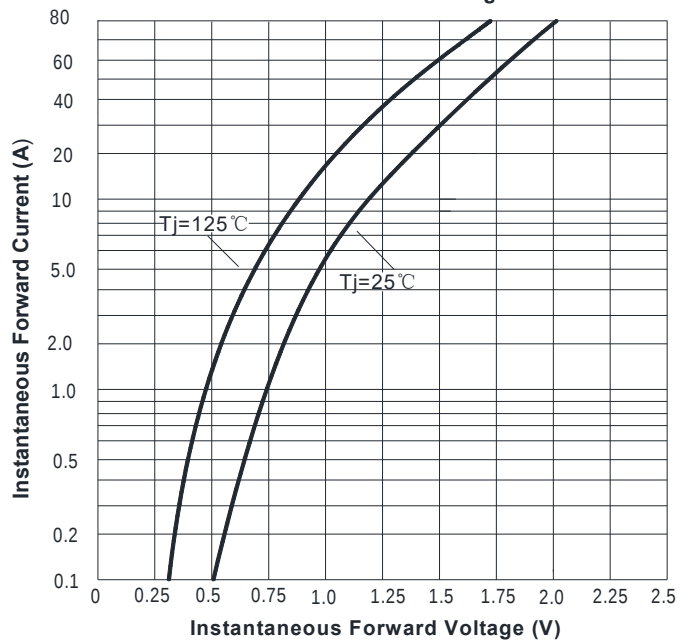
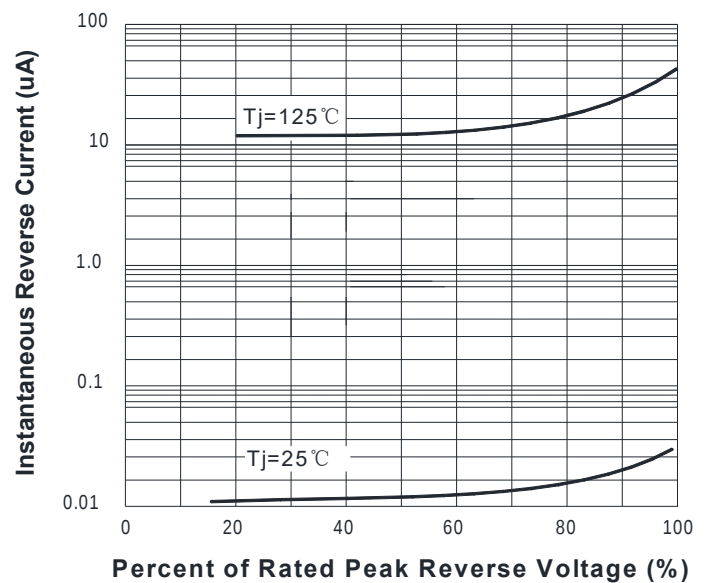


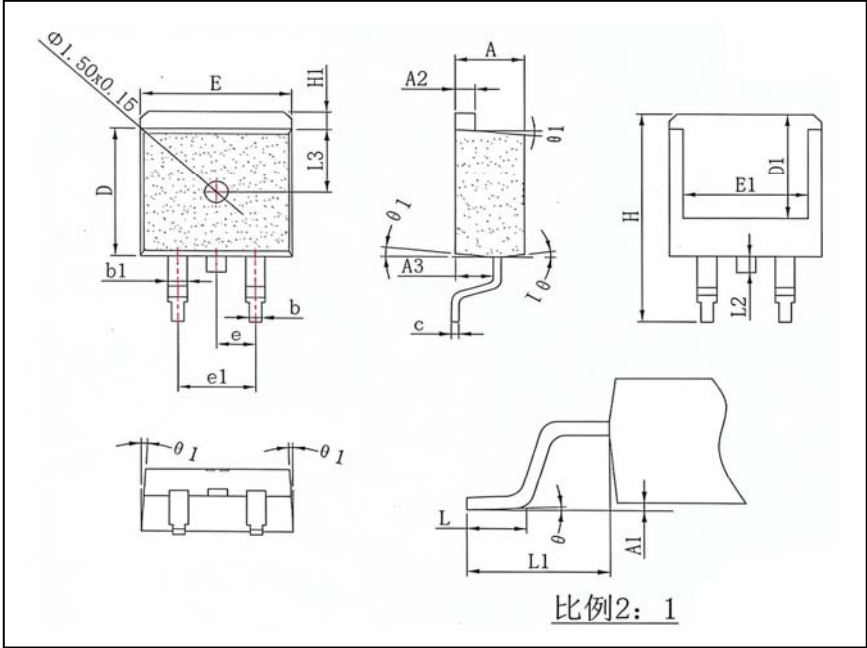
FIG4: Instantaneous Reverse Characteristics





MURB7560L-F2-W5038HF

■Outline Dimensions



SYMBOL	mm		
	MIN	NOM	MAX
*A	4.40	4.50	4.60
*A1	0.00	0.10	0.20
*A2	1.25	1.30	1.35
*A3	2.30	2.40	2.50
*b	0.70	0.80	0.90
*b1	1.24	1.32	1.40
*c	0.45	0.50	0.55
*D	9.10	9.20	9.30
D1	7.90REF		
*E	9.88	10.02	10.15
E1	7.85	8.00	8.15
*e	2.50	2.54	2.58
e1	5.08BSC		
*H	15.00	15.15	15.30
H1	1.12	1.28	1.42
L	2.10	2.23	2.36
L1	4.55	4.75	4.95
L2	1.10	1.30	1.50
L3	4.55	4.65	4.75
θ	0°	2.5°	5°
$\theta 1$	2°	-	7°



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