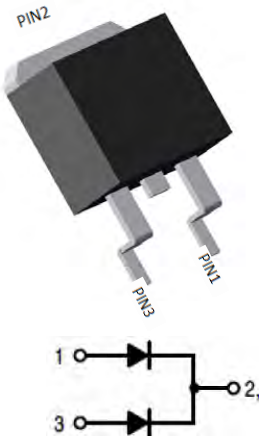
MUR16120CTB

03-JUN-2023

Superfast Recovery Rectifier

MUR16120CTB

TO-263



Features

- Low forward voltage drop
- Low leakage
- High current capability
- Super fast switching speed
- High forward surge capability
- High reliability.

Mechanical Data

- Epoxy: UL 94V-O rate flame retardant
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.054ounce, 1.549gram

Parameter		Symbols	MUR16120CTB	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	1200	V
Maximum RMS voltage		V_{RMS}	840	V
Maximum DC Blocking Voltage		V_{DC}	1200	V
Maximum Average Forward Rectified Current	device	$I_{(AV)}$	8.0	A
	per diode		16.0	
Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A		Trr	50	ns
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	80	A
I^2t rating for fusing (1ms< t < 10ms)		I^2t	26.5	A^2S
Maximum Forward Voltage at 8A and 25℃		V_F	2.0	V
Maximum Forward Voltage at 8A and 125℃			1.7	
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C		I_R	2 5	μA
Operating and Storage Temperature Range		Tj, Tstg	-50~ +150	°C
Typical thermal resistance (Note 1)		RthJC	2	°C/W

Note: 1. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.
Unit mounted on glass-epoxy substrate with 1oz/ft2_20x20 mm copper pad per pin with heatsink

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

FIG. 1 Forward Current Derating Curve

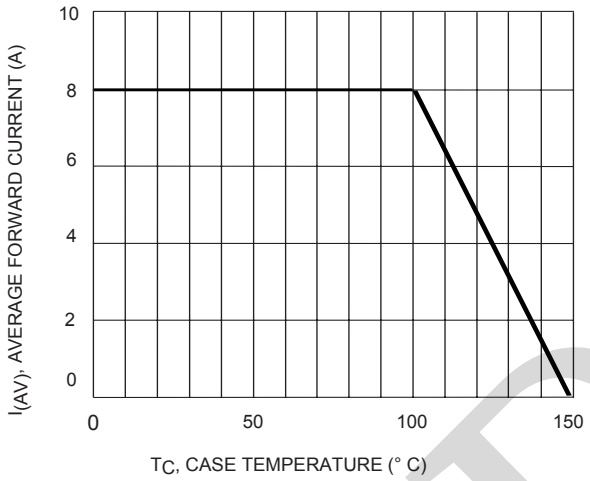


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

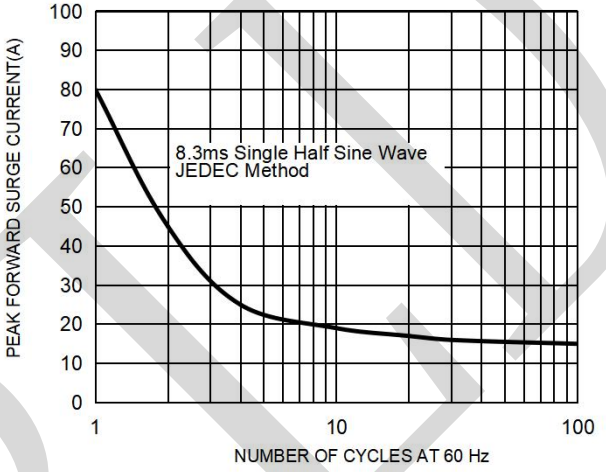


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

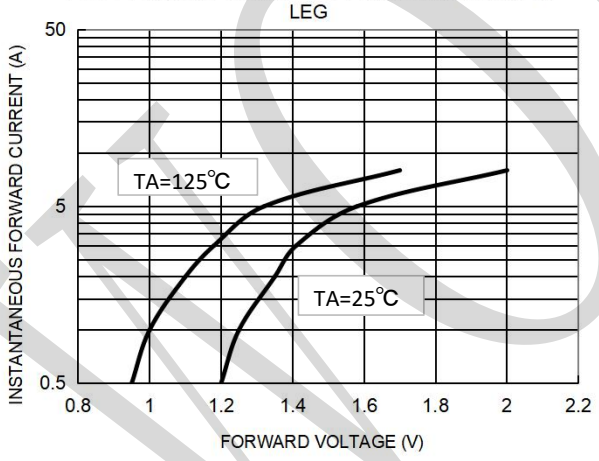
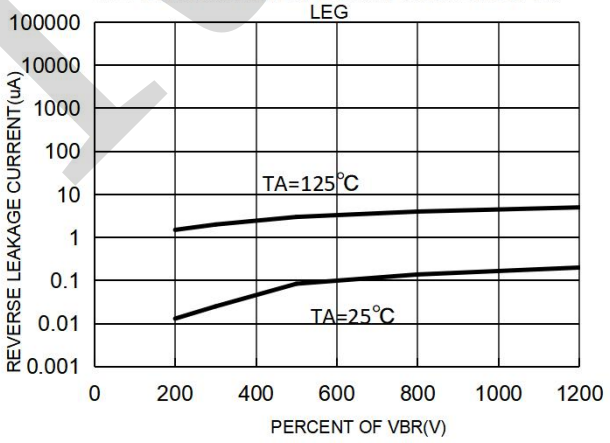


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



PACKAGE OUTLINE DIMENSIONS

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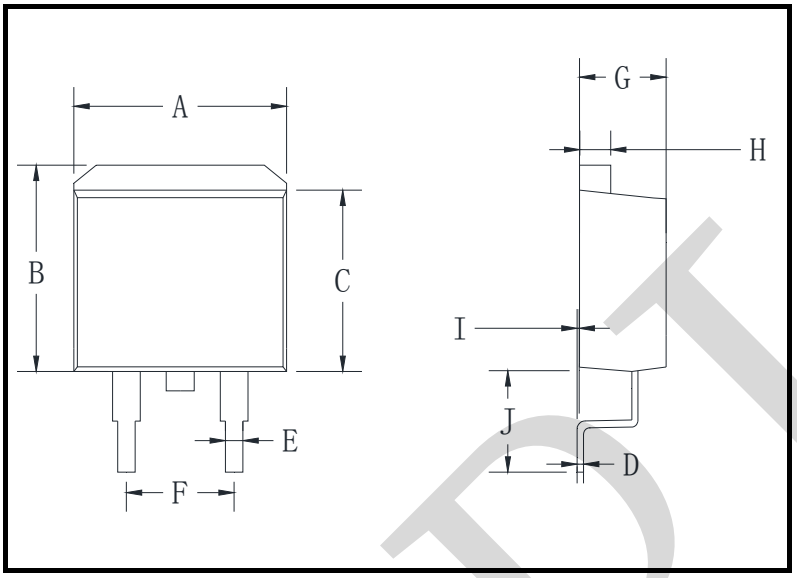
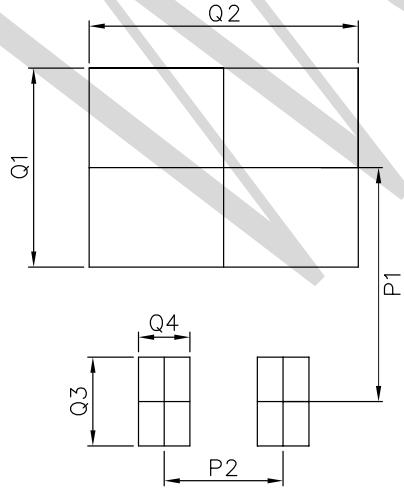


TO-263 mechanical data

UNIT		A	B	C	D	E	F	G	H	I	J
mm	max	11.5	10.5	9.0	0.64	0.94	5.6	5.1	1.4	0.6	6.1
	min	9.5	9.7	8.4	0.28	0.68	4.5	4.0	1.1	0	4.9
mil	max	452.7	413.3	354.3	25.2	37.0	220.5	200.8	55.1	23.6	240.1
	min	374.0	381.8	330.7	11.0	26.7	177.2	157.5	43.3	0.6	192.9

TO-263 Suggested Pad Layout



UNIT		P1	P2	Q1	Q2	Q3	Q4
mm	min	10.0	4.00	8.5	11.5	3.8	2.1
mil	min	393.3	157.5	39.37	334.6	149.6	82.7