

Ultra-Fast Recovery Diodes

Features

- ◆ High frequency operation.
High surge forward current capability
- ◆ High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- ◆ Guard ring for enhanced ruggedness and long term reliability
- ◆ Solder dip 275 °C max. 7s, per JESD 22-B106

TO-220AB



PIN



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	SYMBOLS	MUR1020DCT	MUR1040DCT	MUR1060DCT	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	V
Maximum RMS voltage	V_{RMS}	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	V
Maximum average forward rectified current at $T_C=110^\circ\text{C}$ per device per diode	$I_{(AV)}$	10.0 5.0			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50.0			A
Maximum instantaneous forward voltage per diode at 5.0A	V_F	1.0	1.3	1.6	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	10 500			μA
Maximum reverse recovery time	T_{rr}	35			ns
Typical thermal resistance	$R_{\theta JC}$	4.0			$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +175			$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +175			$^\circ\text{C}$

Note: 1. Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$

Ratings And Characteristic Curves

Fig.1 Typical Forward Current Derating Curve

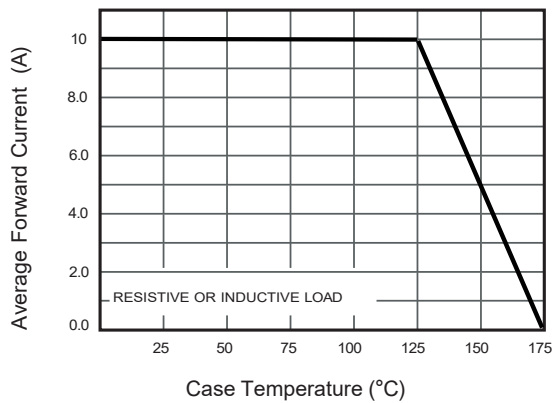


Fig.2 Typical Reverse Characteristics

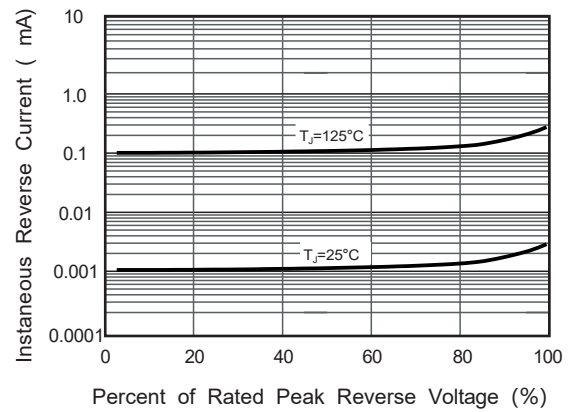


Fig.3 Typical Forward Characteristic

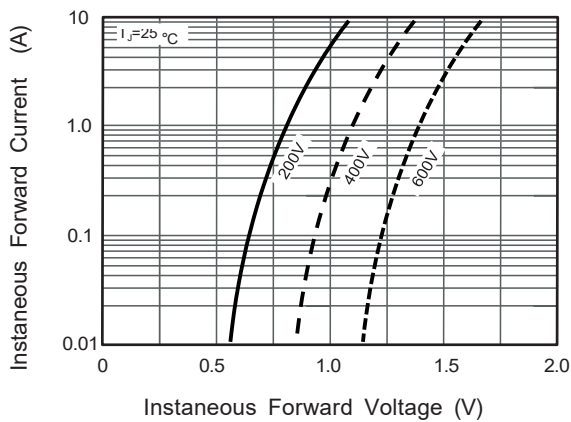
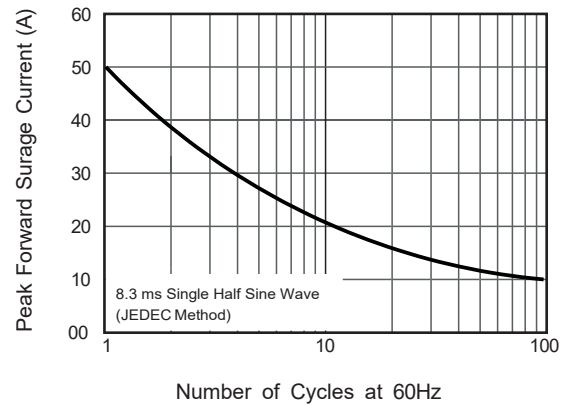


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.