MUR1020CG-Q1 THRU MUR1060CG-Q1

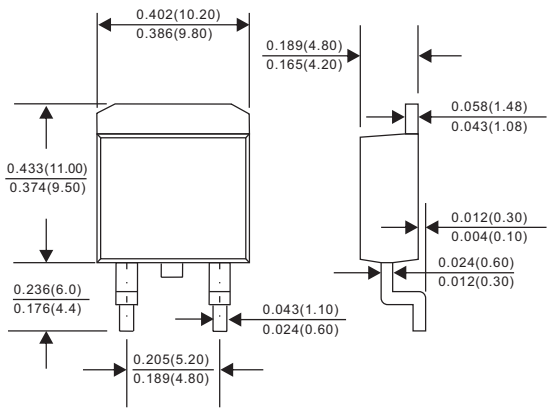
10A Super Fast Recovery Rectifiers - 200V-600V

Features

- Dual rectifier construction, positive centetap, offer 5.0A Half wave and 10.0A full wave rectification.
- High surge current capability.
- Super fast recovery time for switching mode application.
- Low power loss.
- Glass passivated chip junctions.
- Lead-free parts meet environmental standards of MIL-STD-19500/228
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Package outline

TO-263AB/D2PAK



Dimensions in inches and (millimeters)

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, TO-263AB / D2PAK
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

Maximum ratings (AT T_A=25°C unless otherwise noted)

PARAMETER	SYMBOLS	MUR1020CG-Q1	MUR1040CG-Q1	MUR1060CG-Q1	UNIT
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	I_O	10			A
Peak forward surge current 8.3ms single half sine-wave(JEDEC method)	I_{FSM}	100			A
Operating junction temperature range	T_J	-55 to +150			°C
Storage temperature range	T_{STG}	-65 to +175			°C

Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	SYMBOLS	MUR1020CG-Q1	MUR1040CG-Q1	MUR1060CG-Q1	UNIT
Maximum forward voltage per leg at IF=8A	V_F	0.98	1.30	1.70	V
Maximum reverse recovery time per leg (Note 1)	trr	25	50		ns
Maximum DC reverse current at TJ =25°C at rated DC blocking voltage per leg at TJ =125°C	I_R	5.0 500			uA uA

Thermal Characteristics

PARAMETER	SYMBOLS	MUR1020CG-Q1	MUR1040CG-Q1	MUR1060CG-Q1	UNIT
Typical thermal resistance junction to case per leg	$R_{\theta JC}$	2.0			°C/W

Note 1: Reverse recovery time test condition, I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Rating and characteristic curves(MUR1020CG-Q1 THRU MUR1060CG-Q1)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

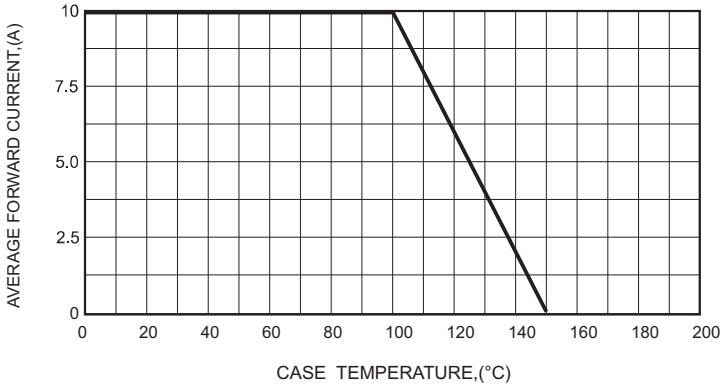


FIG.2-TYPICAL FORWARD CHARACTERISTICS

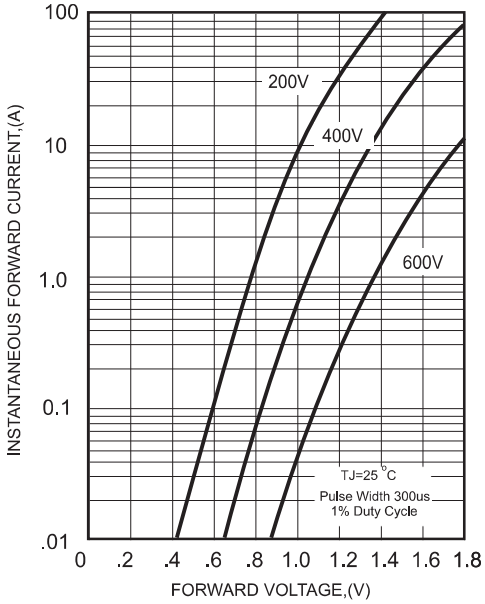


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

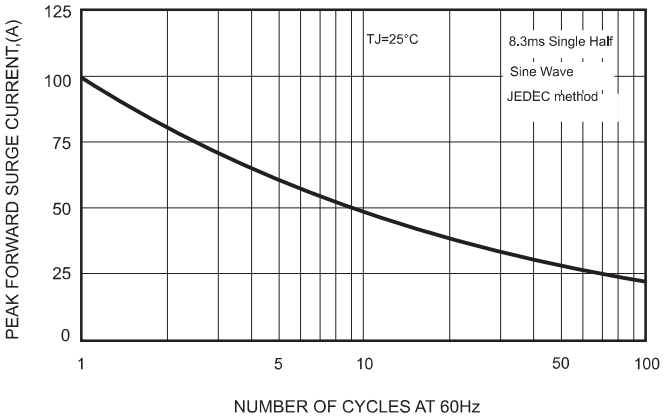


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

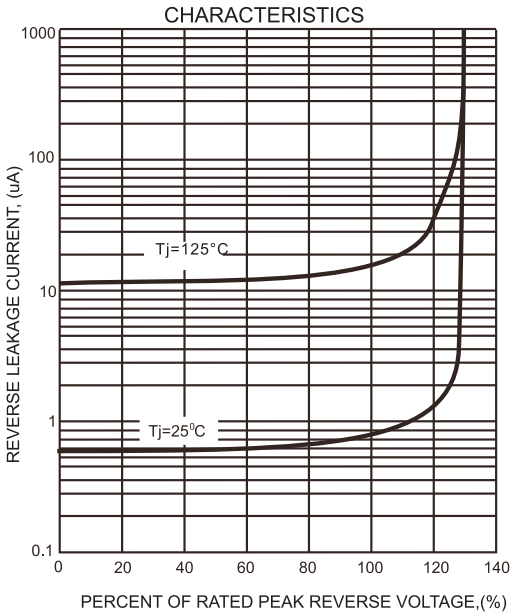
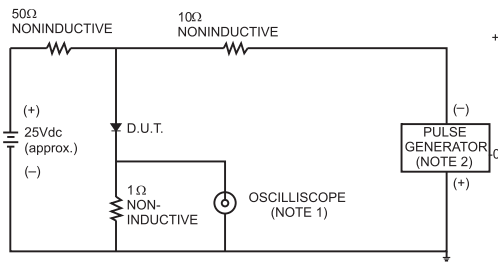
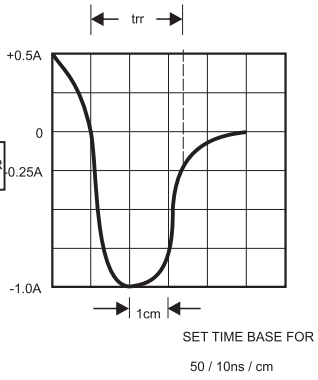


FIG.5- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

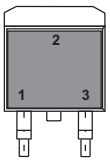
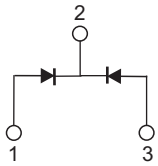




NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

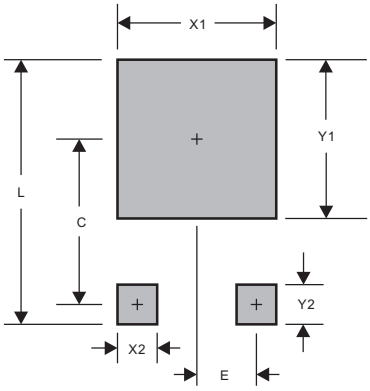
Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MUR1020CG-Q1	MUR1020CG
MUR1040CG-Q1	MUR1040CG
MUR1060CG-Q1	MUR1060CG

Suggested solder pad layout



PACKAGE	D2PAK
C	0.374(9.50)
E	0.098(2.50)
L	0.665(16.90)
X1	0.425(10.80)
X2	0.071(1.80)
Y1	0.449(11.40)
Y2	0.138(3.50)

Dimensions in inches and (millimeters)