SEMICONDUCTOR

MUR4040CT

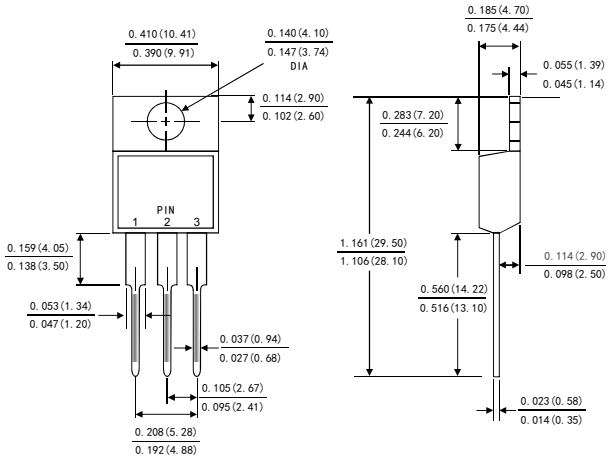
POLYIMIDE PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 400 Volts
Forward Current - 40.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Polyimide passivation
- Fast switching for high efficiency
- Low forward voltage drop
- Low Reverse Leakage Current
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2011/65/EU

TO-220AB



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: TO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	400	V
Maximum average forward rectified current	$I_{F(AV)}$	40.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	300	A
Operating junction temperature range	T_J	-55 to+175	℃
Storage temperature range	T_{stg}	-55 to+175	℃

RATINGS AND CHARACTERISTIC OF MUR4040CT

ELECTRICAL CHARACTERISTCS（T_J=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200μA		V_{BR} V_R	400	–	–	V
Instaneous forward voltage	T_J=25℃	IF=20A	V_F 1)	–	1. 10	1. 30	V
	T_J=125℃			–	0. 95	–	
Reverse current	T_J=25℃	VR=200V	I_R 2)	–	–	5	μA
	T_J=125℃			–	–	50	

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

DYNAMIC RECOVERY CHARACTERISTCS（T_J=25℃ Unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	I_F=0.5A,I_R=1.0A, Irr=0.25A	trr	–	30	40	ns

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-220AB	Unit
Typical thermal resistance 3)	$R_{\theta JC}$	2. 0	℃/W

3.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC OF MUR4040CT

FIG.1-FORWARD CURRENT DERATING CURVE

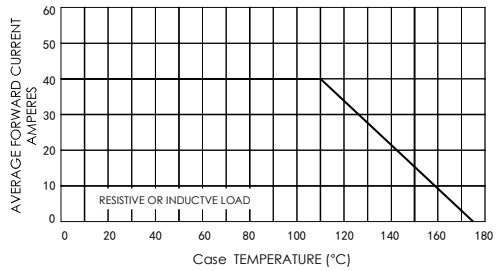


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

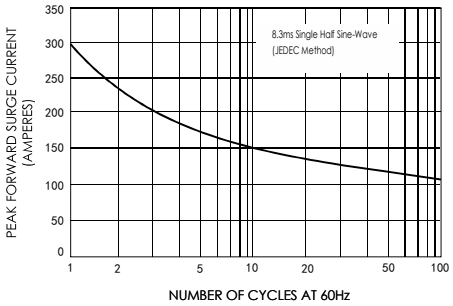


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

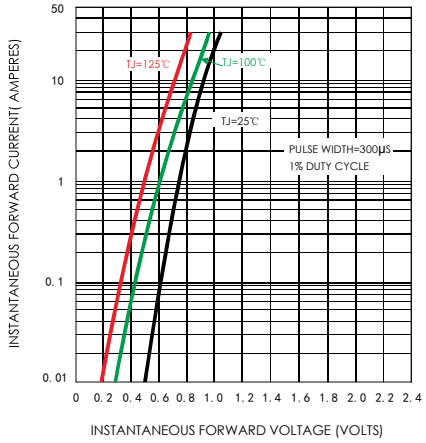


FIG.4-TYPICAL REVERSE CHARACTERISTICS

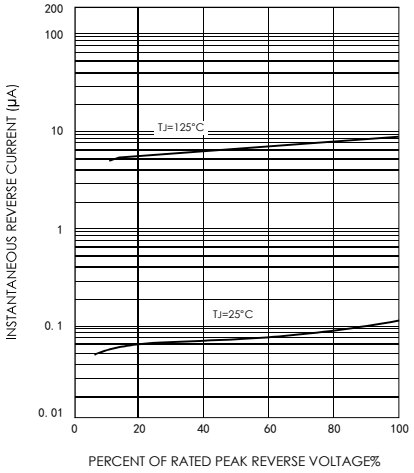


FIG.5-TYPICAL JUNCTION CAPACITANCE