SUPER FAST RECTIFIERS

VOLTAGE RANGE: 200 --- 600V
CURRENT: 5.0 A

FEATURES

◇ Metal-Semiconductor junction with guard ring
◇ Epitaxial construction
◇ Low forward voltage drop,low switching losses
◇ High surge capability
◇ For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

◇ Case:JEDEC TO-220AC ,molded plastic
◇ Terminals: Axial lead ,solderable per MIL- STD-750,Method 2026
◇ Polarity: Color band denotes cathode
◇ Weight: 0.08 ounces,2.24 grams
◇ Mounting position: Any

TO-220AC

Dimensions in inches and (millimeters)
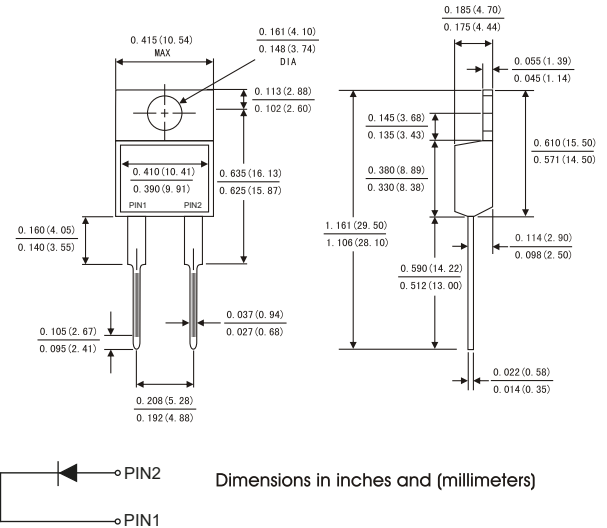
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

		Symbols	MUR520	MUR540	MUR560	Units
Maximum repetitive peak reverse voltage		V_{RRM}	200	400	600	Volts
Maximum RMS voltage		V_{RMS}	140	280	420	Volts
Maximum DC blocking voltage		V_{DC}	200	400	600	Volts
Maximum average forward rectified current(see Fig.1)		$I_{(AV)}$	5.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	75			Amps
Maximum instantaneous forward voltage at 10.0 A(Note 1)		V_F	0.975	1.3	1.7	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$T_A=25℃$	I_R	5			uA
	$T_A=125℃$		500			
Maximum Reverse Recovery Time (Note 2)		T_{rr}	35			ns
Typical thermal resistance (Note 3)		$R_{\theta JC}$	2.5			℃/W
Operating junction temperature range		T_J	-40 to+150			℃
Storage temperature range		T_{STG}	-40 to+150			℃

Note: 1. Pulse test : 300μs pulse width,1% duty cycle.
   2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
   3.Thermal resistance junction to ambient.

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RATINGS AND CHARACTERISTIC CURVES

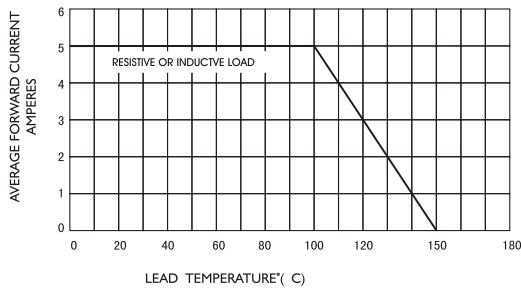### FIG.1-FORWARD CURRENT DERATING CURVE

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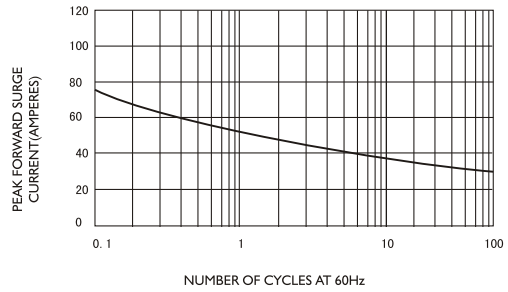

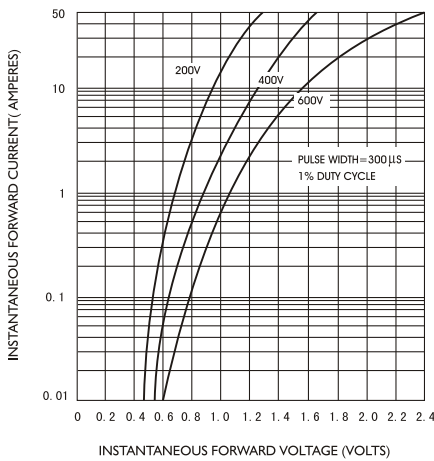### FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

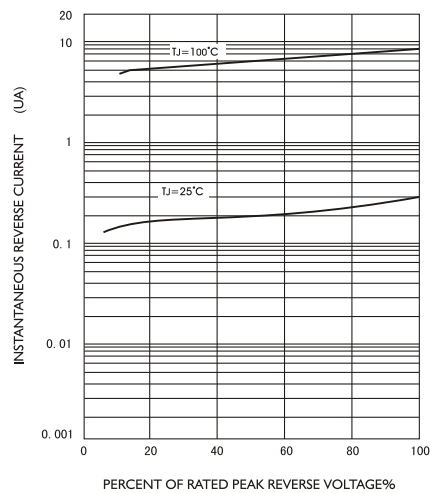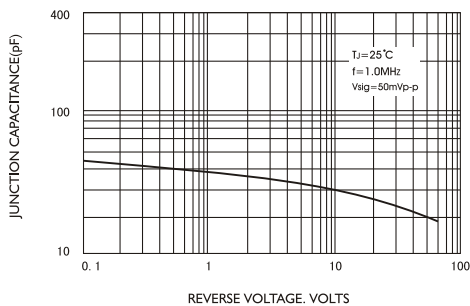

FIG.4-TYPICAL REVERSE CHARACTERISTICS

FIG.5-TYPICAL JUNCTION CAPACITANCE

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE