

MUR420 THRU MUR460

SUPER FAST RECOVERY SILICON RECTIFIER

Reverse Voltage - 200 to 600 Volts Forward Current - 4.0 Ampere



FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Super fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Lead free Finish/ROHS Compliant

MECHANICAL DATA

Case: JEDEC DO-27 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

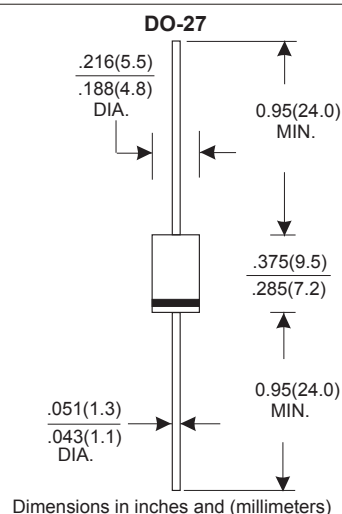
Weight: 1.04 grams

VOLTAGE RANGE

200 to 600 Volts

CURRENT

4.0 Amperes



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

Type Number	Symbol	MUR420	MUR440	MUR460	Units
Maximum Recurrent 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 .375"(9.5mm) Lead Length (See Fig. 1)	I _(AV)	4.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	125	70		A
Maximum Instantaneous Forward Voltage @ 4.0A	V _F	0.95	1.30		V
Maximum DC Reverse Current @ T _C =25 °C at Rated DC Blocking Voltage @ T _C =125 °C (Note 4)	I _R	5.0 150	10 250		uA uA
Maximum Reverse Recovery Time (Note 1)	T _{RR}	25	50		nS
Typical Junction Capacitance (Note 2) T _J = 25 °C (Fig. 5)	C _j	65			pF
Maximum Forward Recovery Time T _{FR} (I _F =1.0A, di/dt = 100A/us, Rev. to 1.0V)	T _{FR}	25	50		nS
Typical Thermal Resistance (Note 3)	R _{θJA}	28			°C/W
Operating Temperature Range	T _J	-65 to +150			°C
Storage Temperature Range	T _{STG}	-65 to +150			°C

Note: 1. Reverse recovery condition $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATING AND CHARACTERISTIC CURVES (MUR420 THRU MUR460)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

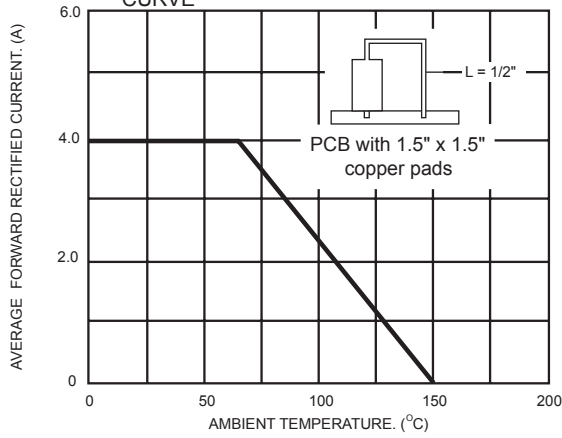


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

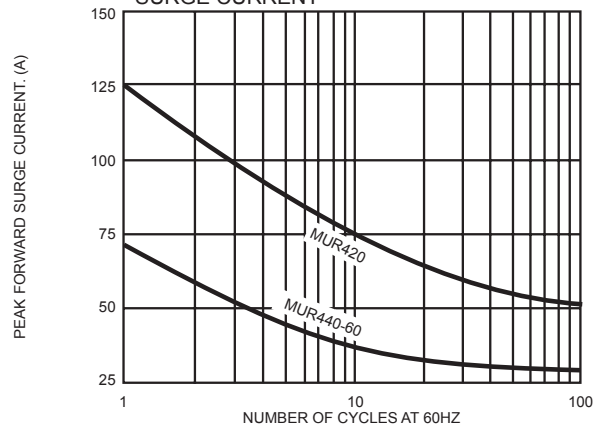


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

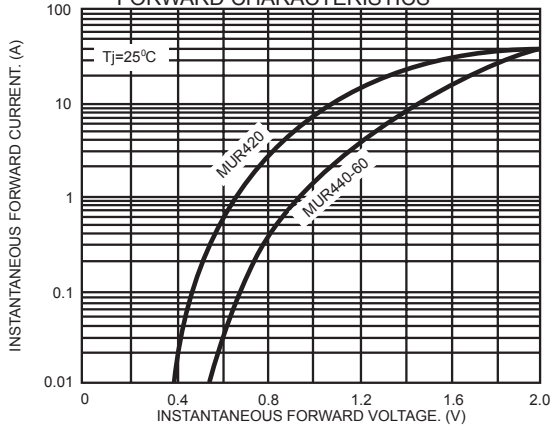


FIG.4- TYPICAL REVERSE CHARACTERISTICS

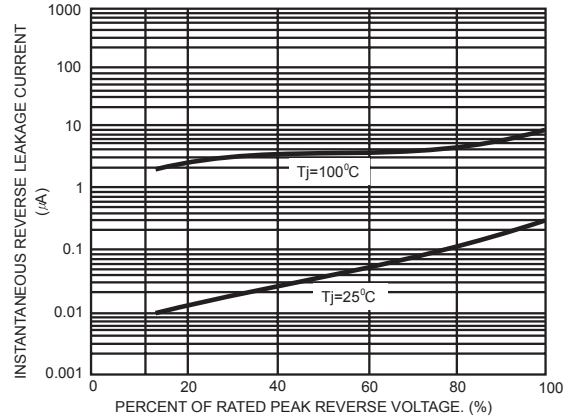


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

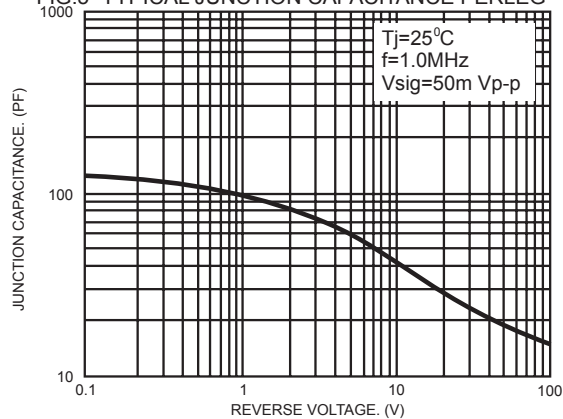


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

