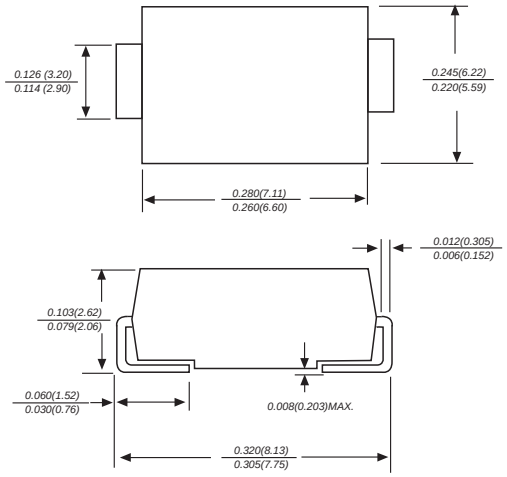
MURS405 THRU MURS460

SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 4.0 Amperes

DO-214AB/SMC



Dimensions in inches and (millimeters)

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250℃/10 seconds at terminals
- Glass passivated chip junction

MECHANICAL DATA

Case : JEDEC DO-214AB molded plastic body over passivated chip
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight :0.007 ounce, 0.25grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

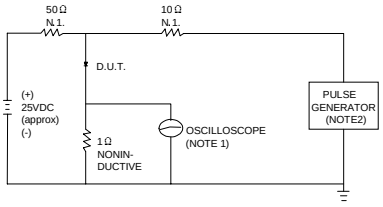
Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

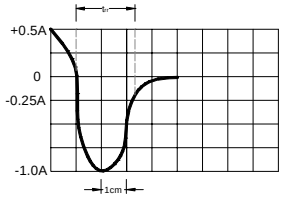
TWGMC Catalog Number		MURS 405	MURS 410	MURS 415	MURS 420	MURS 430	MURS 440	MURS 450	MURS 460	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current @T_A=75℃	$I_{F(AV)}$	4.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T_J=125℃	I_{FSM}	125.0								A
Maximum instantaneous forward voltage @ 4.0A	V_F	0.89				1.28				V
Maximum reverse current @T_A=25℃ / at rated DC blocking voltage @T_A=125℃	I_R	10.0 / 100.0								μA
Maximum reverse recovery time (Note1)	t_{rr}	25				50				ns
Typical junction capacitance (Note2)	C_J	95								pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	20								℃/W
Operating junction temperature range	T_J	- 55 to + 150								℃
Storage temperature range	T_{STG}	- 55 to + 150								℃

NOTE: 1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to ambient.

RATINGS AND CHARACTERISTIC CURVES MURS405 THRU MURS460

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC





NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1MΩ. 22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 10/20 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

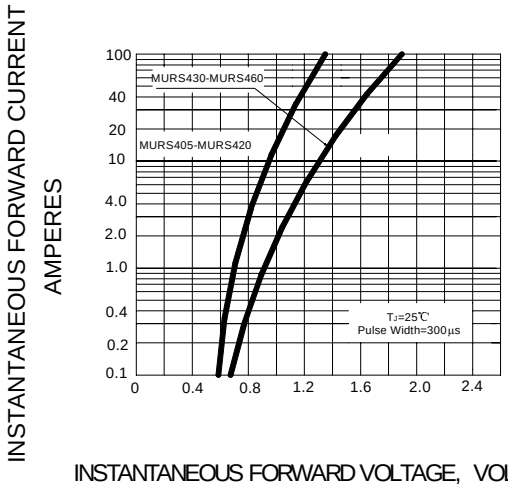


FIG.3 – TYPICAL REVERSE CHARACTERISTIC

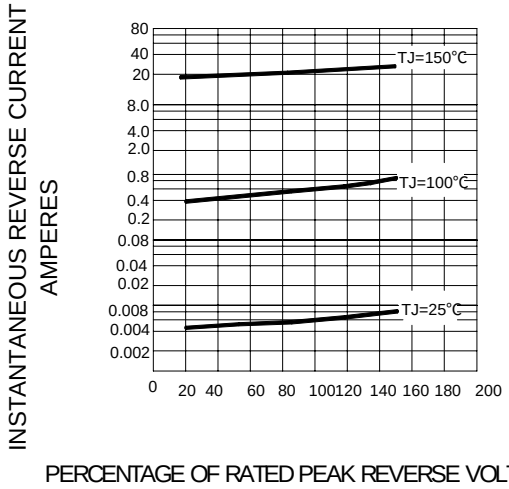


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

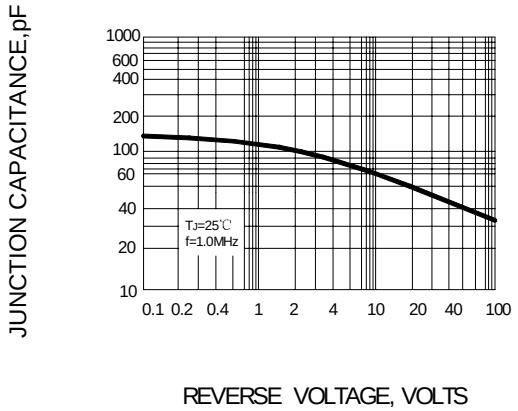
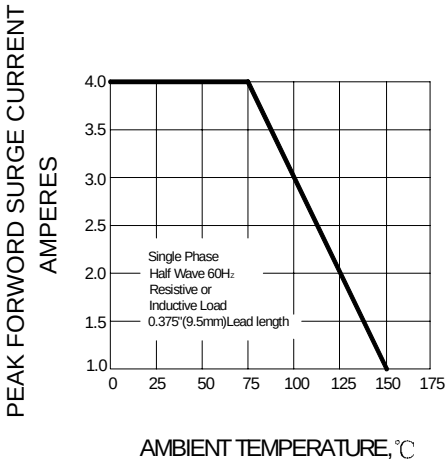



FIG.5--FORWORD DERATING CURVE