

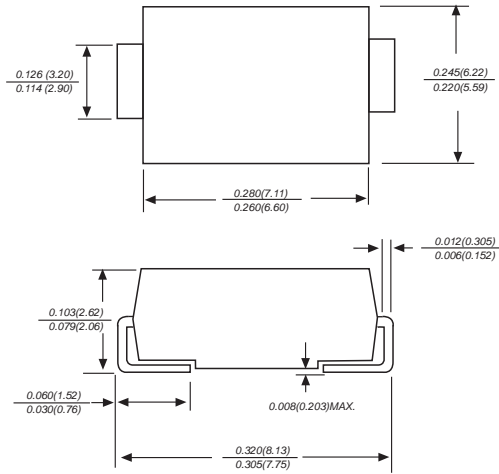


MURS405 THRU MURS460

SURFACE MOUNT SUPER FAST RECTIFIER

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

DO-214AB/SMC



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°C/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°C ambient temperature unless otherwise specified.

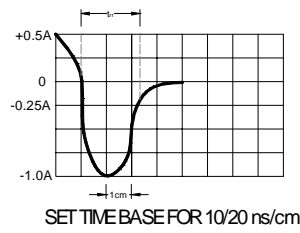
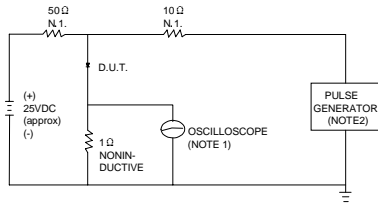
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		MURS 405	MURS 410	MURS 415	MURS 420	MURS 430	MURS 440	MURS 450	MURS 460	UNITS
MDD Catalog Number		405	410	415	420	430	440	450	460	
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 @ $T_A = 75^\circ C$	$I_{F(AV)}$	4.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J = 125^\circ C$	I_{FSM}	125.0								A
Maximum instantaneous forward voltage @ 4.0A	V_F	0.89				1.28				V
Maximum reverse current @ $T_A = 25^\circ C$ at rated DC blocking voltage @ $T_A = 125^\circ C$	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								$^\circ C/W$
Operating junction temperature range	T_J	- 55 to + 150								$^\circ C$
Storage temperature range	T_{STG}	- 55 to + 150								$^\circ C$

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.

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

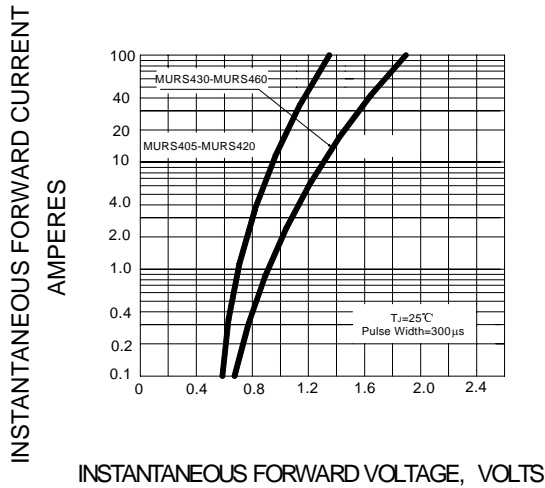


FIG.3 – TYPICAL REVERSE CHARACTERISTIC

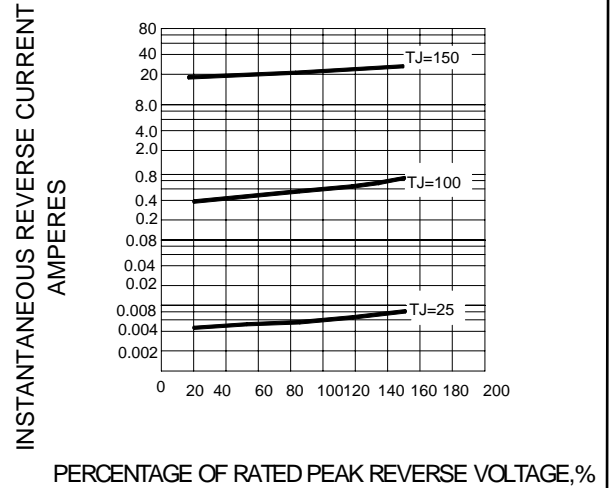


FIG.4 – TYPICAL JUNCTION CAPACITANCE

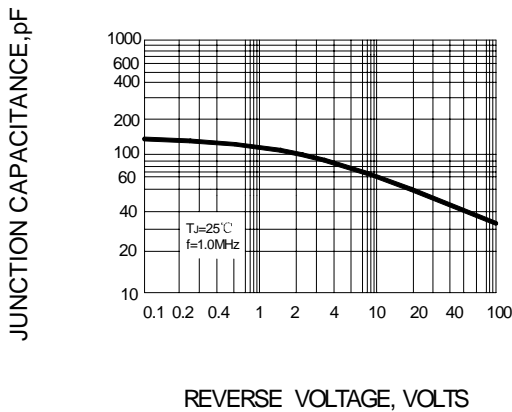


FIG.5 – FORWARD DERATING CURVE

