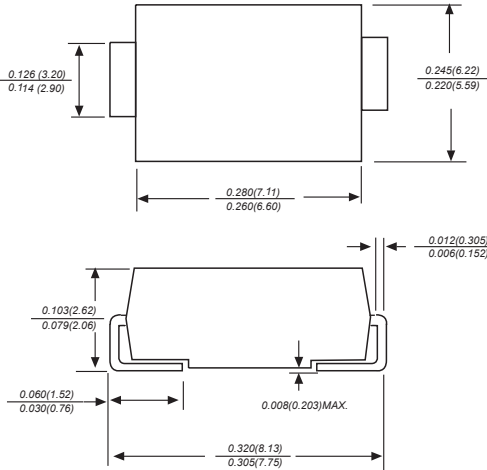


MURS520 THRU MURS560

SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

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°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 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	MURS520	MURS540	MURS560	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 at $T_L=55^\circ\text{C}$	$I_{(AV)}$	5.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0			Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.98	1.28		Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 150.0			μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35	50		ns
Typical junction capacitance (NOTE 2)	C_J	75	63		pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	47.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150			$^\circ\text{C}$

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

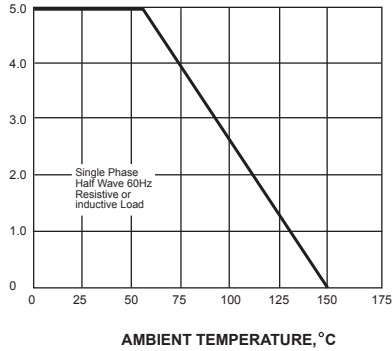
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

MURS520 THRU MURS560

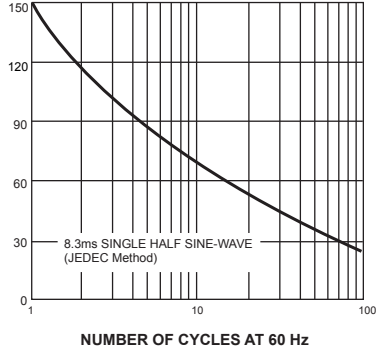
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



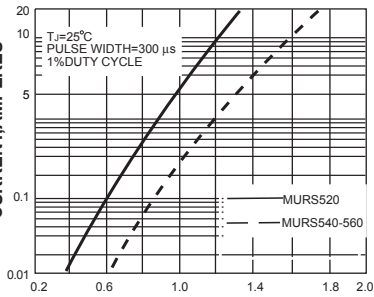
PEAK FORWARD SURGE CURRENT, AMPERES

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



INSTANTANEOUS FORWARD CURRENT, AMPERES

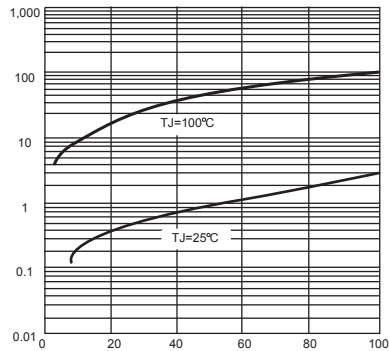
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

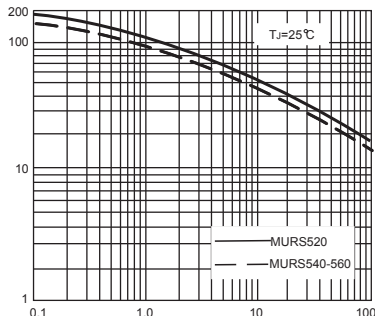
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

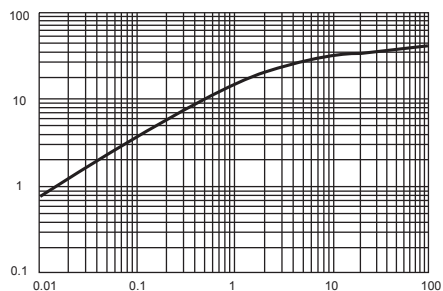
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE, °C/W

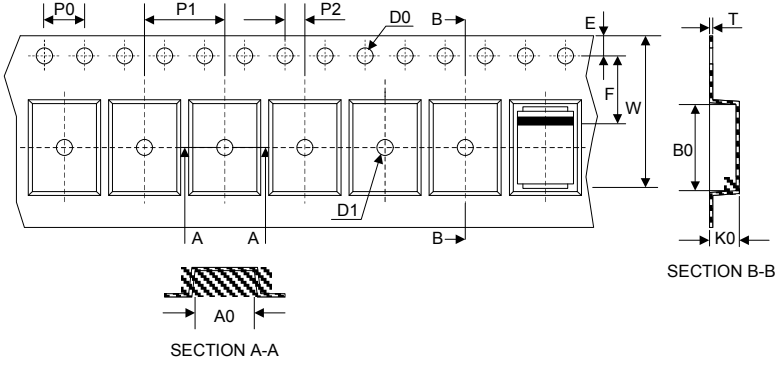
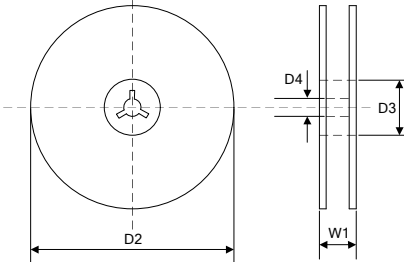
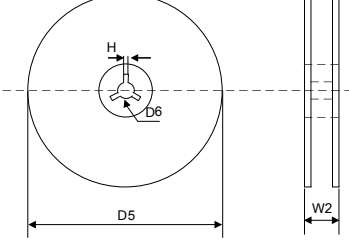
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t,PULSE DURATION,sec.

MURS520 THRU MURS560

Packaging

Tape	Symbol	Dimension (mm)
	W	16.00±0.20
	P0	4.00±0.10
	P1	8.00±0.10
	P2	2.00±0.10
	D0	Φ1.5±0.10
	D1	Φ1.5±0.10
	E	1.75±0.10
	F	7.50±0.10
	A0	6.27±0.10
	B0	8.30±0.10
	K0	3.15±0.15
	T	0.30±0.05
	7" Reel	D2
	D3	Φ50.0Min.
	D4	Φ13.0±0.5
	W1	20.0±2.0
	Quantity: 500PCS	
	13" Reel	D5
	D6	Φ13.5±0.5
	H	2.5±1.0
	W2	20.0±2.0
	Quantity: 3000PCS	