

S05A30 THRU S05A60

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage – 30 to 60 Volts

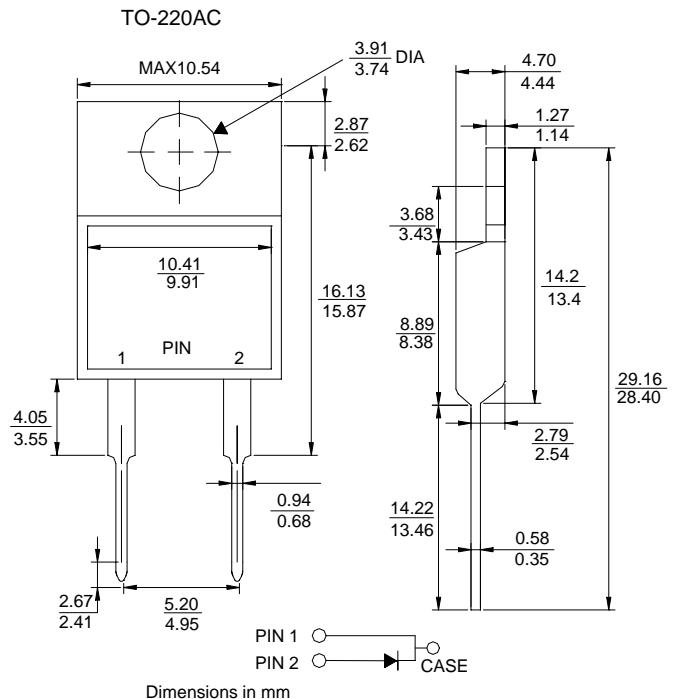
Forward Current – 10.0 Amperes

Features

- Plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds

Mechanical Data

- Case: Molded plastic body, TO-220AC
- Terminals: leads solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting Position: Any



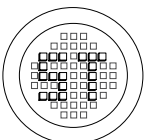
Absolute Maximum Ratings and Characteristics

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	S05A30	S05A40	S05A45	S05A50	S05A60	Units
Maximum repetitive peak reverse voltage	V_{RRM}	30	40	45	50	60	V
Maximum RMS voltage	V_{RMS}	21	28	32	35	42	V
Maximum DC blocking voltage	V_{DC}	30	40	45	50	60	V
Maximum average forward rectified current	$I_{(AV)}$	10					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125					A
Maximum instantaneous forward voltage at 5.0A	V_F	0.55			0.65		V
Maximum DC reverse current at rated DC blocking voltage	I_R	1.0					mA
		30.0					
Typical junction capacitance (Note 1)	C_J	550					pF
Typical thermal resistance (Note 2)	R_{JC}	3.0					? /W
Operating junction temperature range	T_J	-65 to +125					?
storage temperature range	T_S	-65 to +150					?

Notes: (1) Measured at 1MHz and applied reverse voltage of 4.0V D.C .

(2) Thermal resistance from Junction to case.



®

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Fig. 1- Forward Current Derating Curve

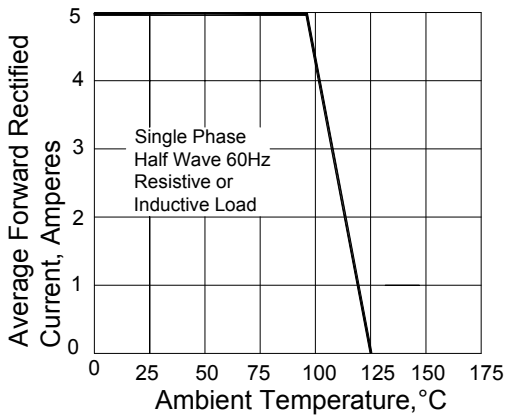


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

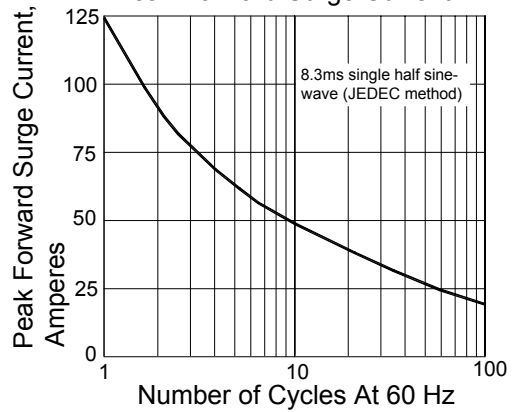


Fig. 3-Typical Instantaneous Forward Characteristics

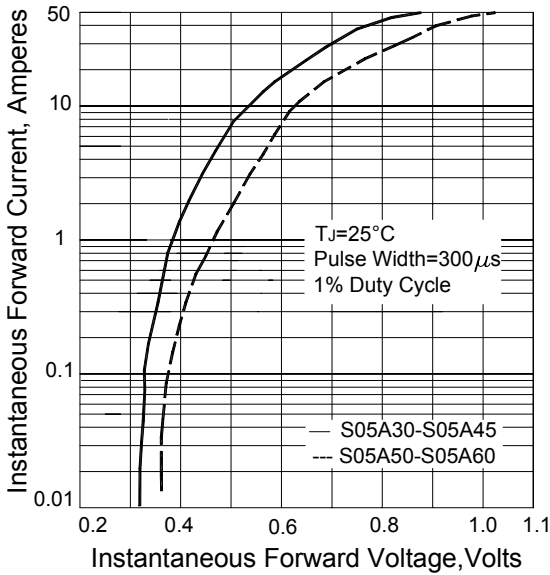


Fig. 4- Typical Reverse Characteristics

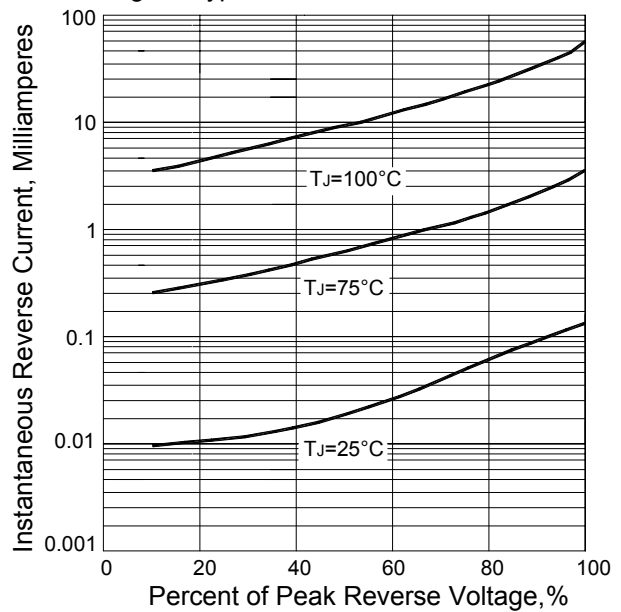


Fig. 5- Typical Junction Capacitance

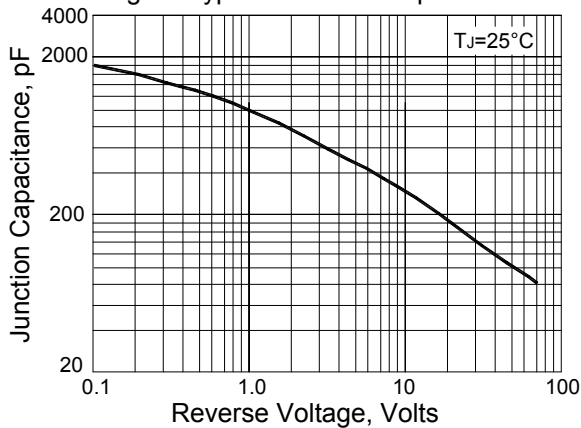
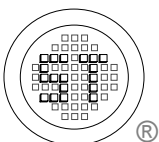
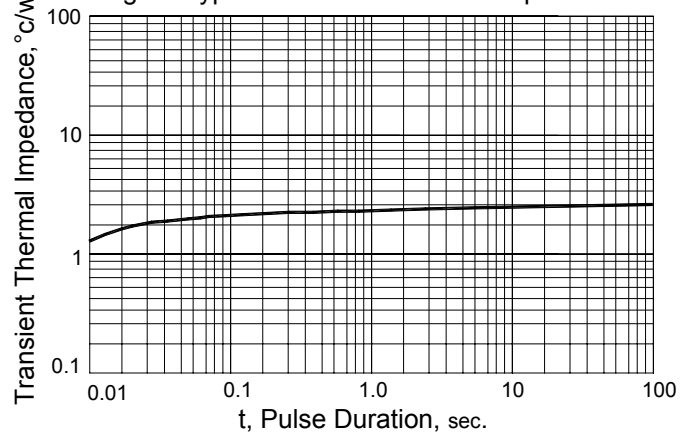


Fig. 6- Typical Transient Thermal Impedance



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