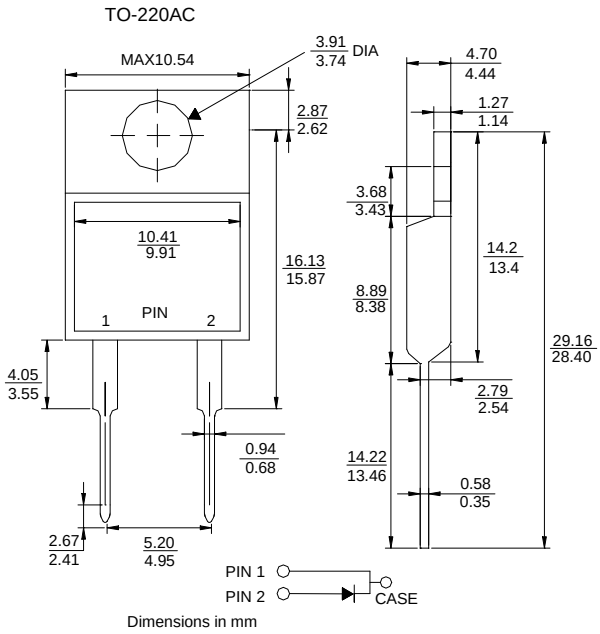
S05A30 THRU S05A60

Schottky Barrier Rectifiers
Reverse Voltage – 30 to 60 V
Forward Current – 10.0 A



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℃,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℃ 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 T_A = 25℃	I_R	1.0					mA
at rated DC blocking voltage T_A =100℃		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_{Stg}	-65 to +150					℃

Notes: (1) Measured at 1MH_Z and applied reverse voltage of 4.0V D.C .
(2) Thermal resistance from Junction to case.

Dated :18/12/2003

Fig. 1- Forward Current Derating Curve

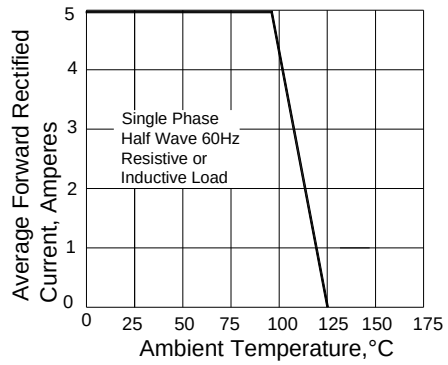


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

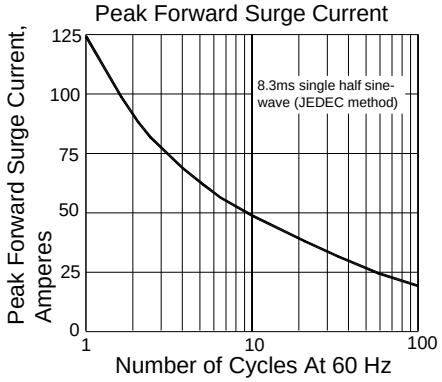


Fig. 3-Typical Instantaneous Forward Characteristics

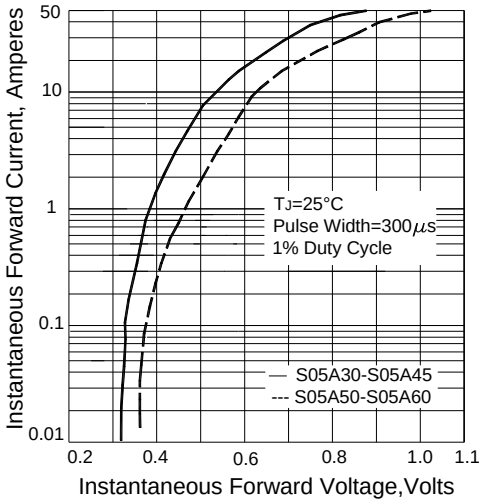


Fig. 4- Typical Reverse Characteristics

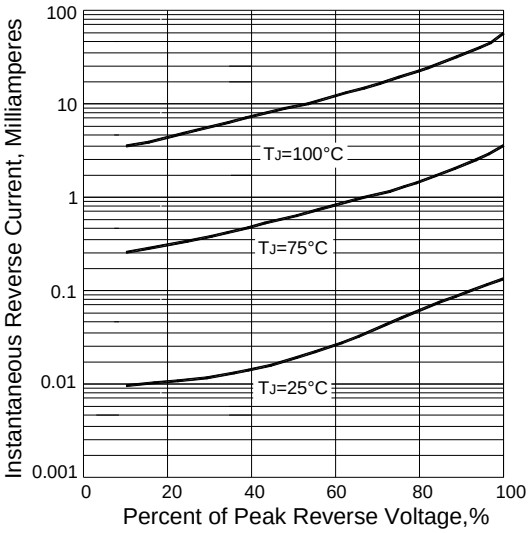


Fig. 5- Typical Junction Capacitance

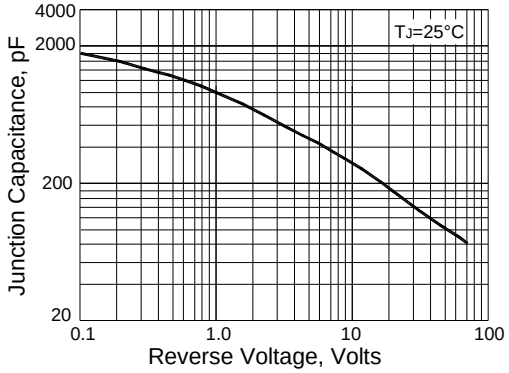


Fig. 6- Typical Transient Thermal Impedance