

Pb Free Plating Product

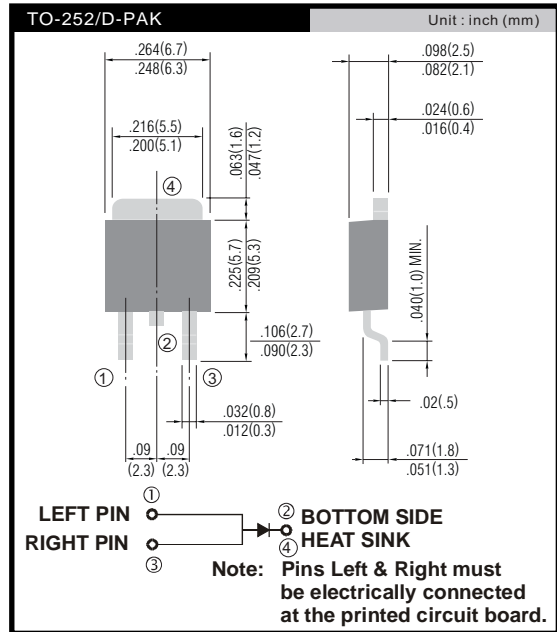
HFA04SD20S thru HFA04SD60S



4.0 Ampere Surface Mount Type Ultra Fast Recovery Rectifier Diodes

Features
★ Ultrafast Recovery Time
★ Soft Recovery Characteristics
★ Low Recovery Loss
★ Low Forward Voltage
★ High Surge Current Capability
★ Low Leakage Current

APPLICATIONS
★ Freewheeling, Snubber, Clamp
★ Inversion Welder
★ PFC/Amplifier
★ Plating Power Supply
★ Ultrasonic Cleaner and Welder
★ Converter & Chopper
★ UPS/LED SMPS/HID



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%.

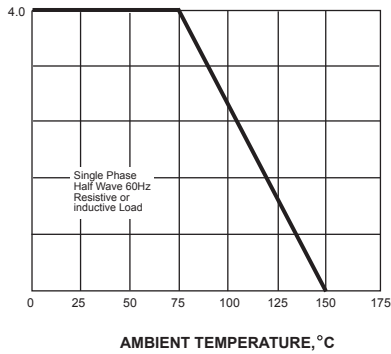
	SYMBOLS	HFA04SD20S	HFA04SD40S	HFA04SD60S	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	200	400	600	VOLTS
Maximum RMS voltage	V _{RMS}	140	280	420	VOLTS
Maximum DC blocking voltage	V _{DC}	200	400	600	VOLTS
Maximum average forward rectified current at T _L =75°C	I _(AV)	4.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125			Amps
Maximum instantaneous forward voltage at 4.0A	V _F	0.95	1.3	1.7	Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	10.0 300.0			μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	17-25			ns
Typical junction capacitance (NOTE 2)	C _J	58.0			pF
Typical thermal resistance	R _{θJA}	47.0			°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150			°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.

RATINGS AND CHARACTERISTIC CURVES HFA04SD20S thru HFA04SD60S

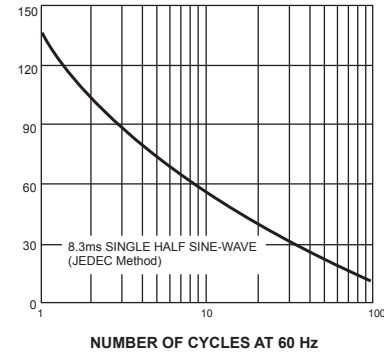
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



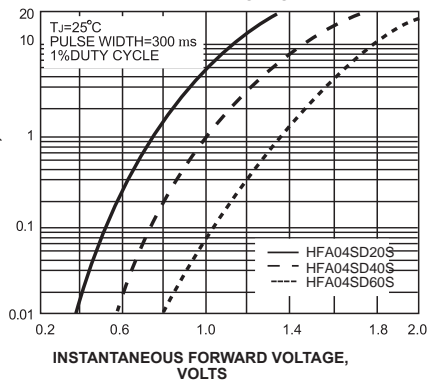
PEAK FORWARD SURGE CURRENT, AMPERES

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



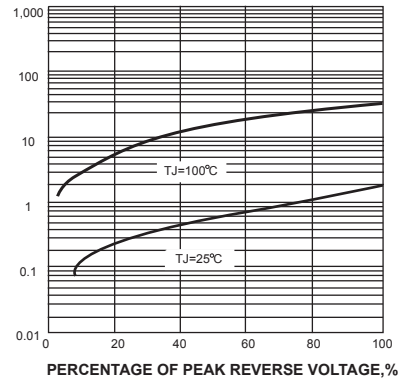
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



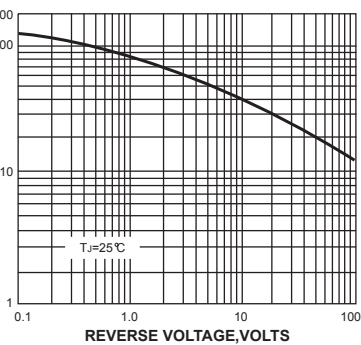
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

