

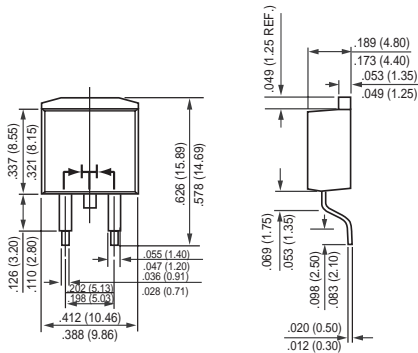


VFD10C05~60

Description



Mechanical Dimensions



D2pack(TO-263)

Dimensions in inch(mm)

FEATURES

- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Ultra fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: D2PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.2 grams

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 current by 20%.

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	VFD10C05	VFD10C10	VFD10C20	VFD10C30	VFD10C40	VFD10C50	VFD10C60	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	500	600	Volts
Maximum RMS Voltage	VRMS	35	70	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current at Tc = 125°C	IO	10.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	125							Amps
Typical Thermal Resistance	RθJC	3							°C/W
Typical Junction Capacitance (Note 2)	CJ	50				30			pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	VFD10C05	VFD10C10	VFD10C20	VFD10C30	VFD10C40	VFD10C50	VFD10C60	UNITS	
Maximum Instantaneous Forward Voltage at 10.0A DC	VF	1.			1.30	1.35	1.70		Volts	
Maximum DC Reverse Current @ Tc = 25°C	IR	10				500			uAmps	
at Rated DC Blocking Voltage @ Tc = 100°C										
Maximum Reverse Recovery Time (Note 1)	trr	50					75			nSec

NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Suffix "A" =Common Anode.



RATING AND CHARACTERISTIC CURVES (VFD10C05 THRU VFD10C60)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

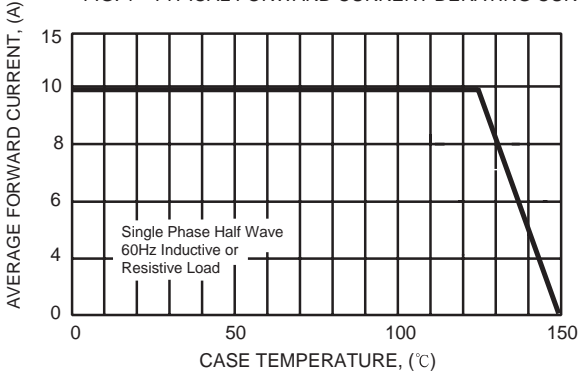


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

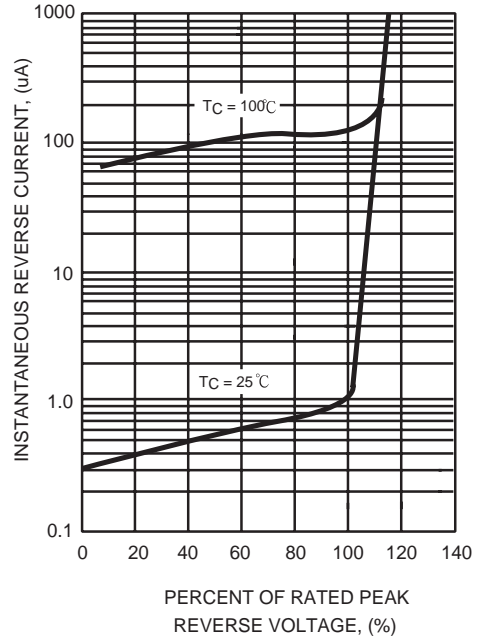


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

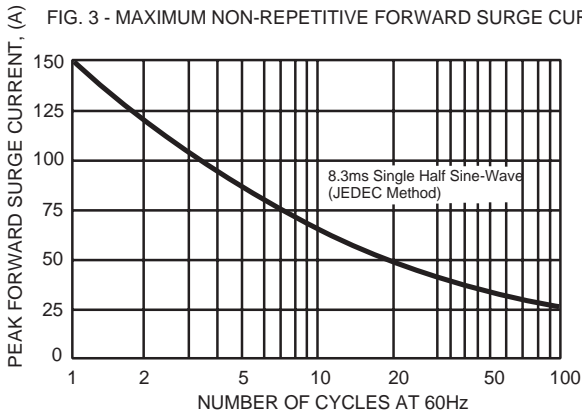


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

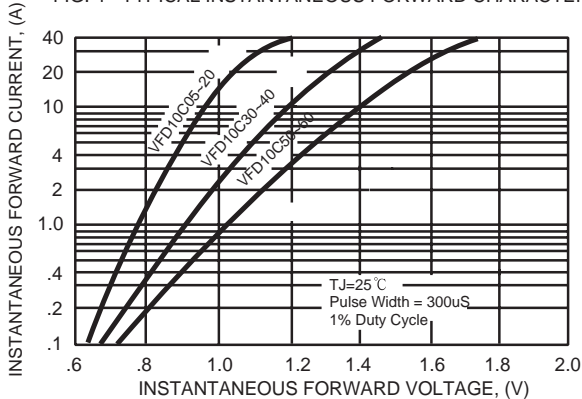


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

