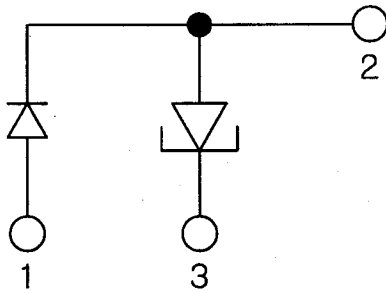


ULTRA FAST RECOVERY AND SCHOTTKY POWER RECTIFIERS

SD10414

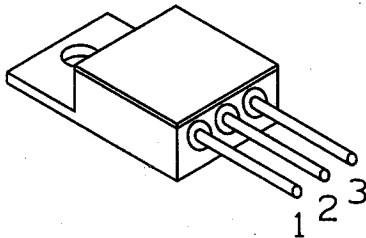
**400V, 15A, 50ns
45V, 15A**

SCHEMATIC



STANDARD CONFIGURATION

JEC



FEATURES

- ISOLATED HERMETIC TO-258AA PACKAGE
- HI-REL CONSTRUCTION
- LEAD BENDING OPTIONS
- COPPER CORED 52 ALLOY PINS
- LOW IR LOSSES
- LOW THERMAL RESISTANCE
- OPTIONAL MIL-STD SCREENING

ELECTRICAL SPECIFICATIONS

MAXIMUM RATINGS

PARAMETERS	SYMBOL	ULTRA FAST RECOVERY RECTIFIER	SCHOTTKY POWER RECTIFIER	UNITS
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWV} V_R	400	45	Volts
Average Rectified Forward Current (Rated V_R)	$I_{F(AV)}$	15 $\text{@ } T_c = 150^\circ\text{C}$	15 $\text{@ } T_c = 125^\circ\text{C}$	Amps
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20 kHz)	I_{FRM}	30 $\text{@ } T_c = 150^\circ\text{C}$	32 $\text{@ } T_c = 125^\circ\text{C}$	Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	150	150	Amps
Peak Repetitive Reverse Surge Current (2.0 μ s, 1.0 kHz)	I_{RRM}	N/A	1.0	Amps
Operating Junction Temperature	T_{J1}	-65 to +150	-65 to +150	°C
Storage Temperature	T_{stg}		-65 to +175	
Voltage Rate of Change (Rated V_R)	dv/dt	N/A	1000	V/ μ s
Maximum Thermal Resistance, Junction to Case	R_{thJc}	1.5	1.5	°C/W

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS

PARAMETERS	SYMBOL	ULTRA FAST RECOVERY RECTIFIER	SCHOTTKY POWER RECTIFIER	UNITS
Maximum Instantaneous Forward Voltage (1) ($I_F = 15$ Amp, $T_c = 150^\circ\text{C}$) ($I_F = 15$ Amp, $T_c = 25^\circ\text{C}$) ($I_F = 16$ Amp, $T_c = 125^\circ\text{C}$) ($I_F = 16$ Amp, $T_c = 25^\circ\text{C}$)	V_F	1.12 1.25 N/A N/A	N/A N/A 0.57 0.63	Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, $T_c = 150^\circ\text{C}$) (Rated dc Voltage, $T_c = 125^\circ\text{C}$) (Rated dc Voltage, $T_c = 25^\circ\text{C}$)	I_R	0.50 N/A 0.010	N/A 40 0.2	mA
Maximum Reverse Recovery Time ($I_F = 1.0$ Amp, $di/dt = 50$ Amp/ μ s)	t_{rr}	60	N/A	ns

REV.3/93

(1) PULSE TEST: PULSE WIDTH 300 μ s, DUTY CYCLE 2%