THINKI SEMICONDUCTOR®

Pb Free Plating Product

FRH20A045/FRH20A06/FRH20A10/FRH20A15/FRH20A20

RoHS Pb

20.0 Ampere Insulated Dual Common Anode Schottky Barrier Rectifiers

Features

- Fast switching for high efficiency
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

Application

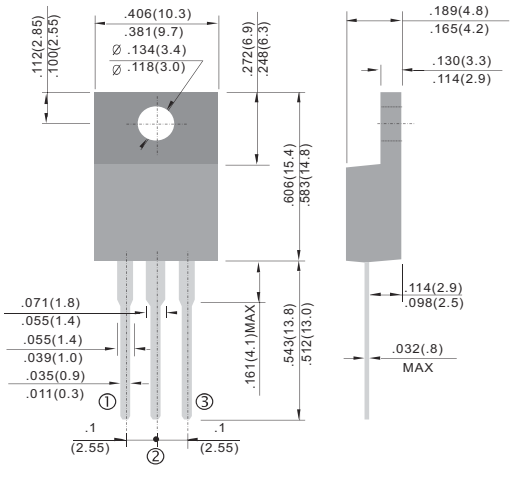
- Automotive Inverters and Solar Inverters
- Plating Power Supply,SMPS and UPS
- Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- Case: Fully Isolated TO-220FP FullPak Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-202 method 208
- Polarity: As marked on diode body
- Mounting position: Any
- Weight: 2.0 gram approxiamtely

ITO-220AB

Unit : inch (mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)							
PARAMETER	SYMBOL	KRH 20A045	KRH 20A06	KRH 20A10	KRH 20A15	KRH 20A20	UNIT
Marking code		KRH20A045	KRH20A06	KRH20A10	KRH20A15	KRH20A20	
Maximum repetitive peak reverse voltage	V_{RRM}	45	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	31	42	70	105	140	V
Maximum DC blocking voltage	V_{DC}	45	60	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	20					A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I_{FRM}	20					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150					A
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1	0.5				A
Maximum instantaneous forward voltage (Note 2) I_F= 10 A, T_J=25℃ I_F= 10 A, T_J=125℃ I_F= 20 A, T_J=25℃ I_F= 20 A, T_J=125℃	V_F	 0.80 0.57 0.84 0.72	 0.80 0.70 0.95 0.85	 0.85 0.75 0.95 0.85	 0.95 0.85 1.05 0.95		V
Maximum reverse current @ rated VR T_J=25 ℃	I_R	0.1					mA
T_J=125 ℃		15	10	5	2		
Voltage rate of change (Rated V_R)	dV/dt	10000					V/μs
Isolation voltage from terminals to heatsink with t=1.0 min	V_{AC}	1500					V
Typical thermal resistance	$R_{\theta JC}$	1.5		3.5			℃ / W
Operating junction temperature range	T_J	- 55 to +150					℃
Storage temperature range	T_{STG}	- 55 to +150					℃

Note 1: tp = 2.0 μs, 1.0KHz

Note 2: Pulse test with PW=300μs, 1% duty cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

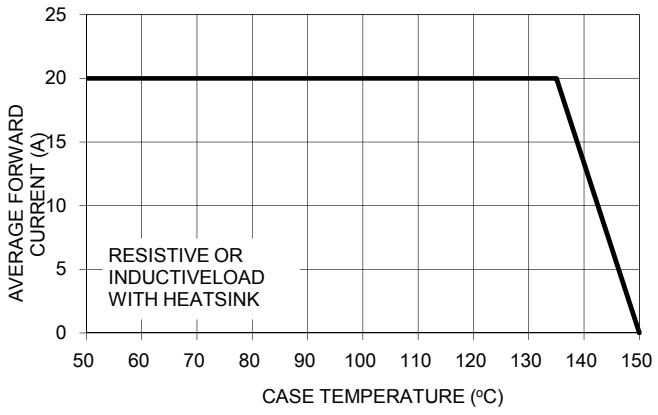


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

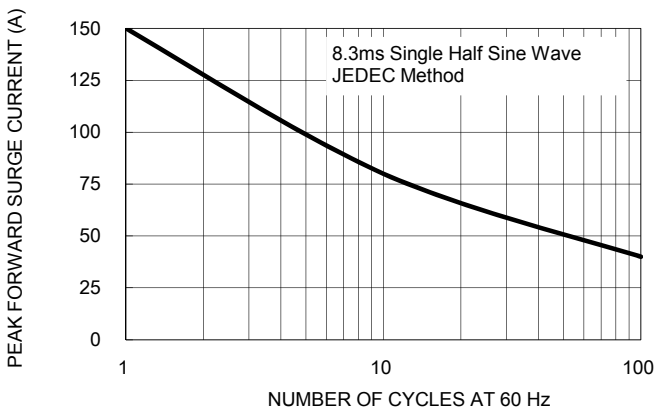


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

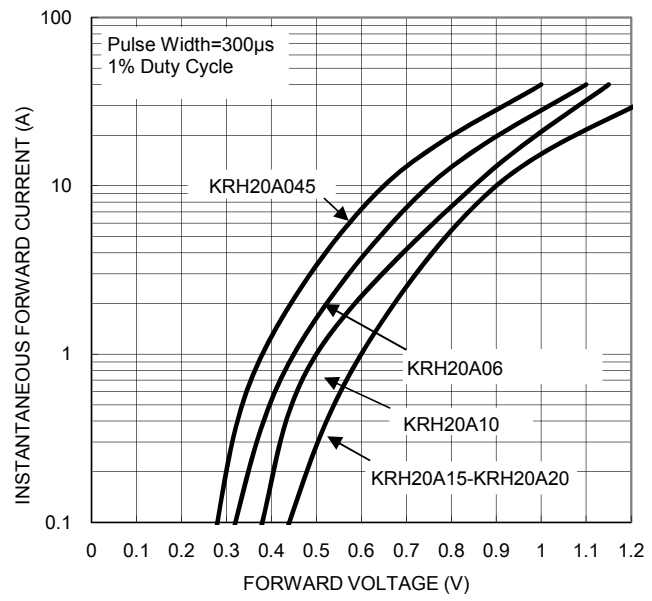


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

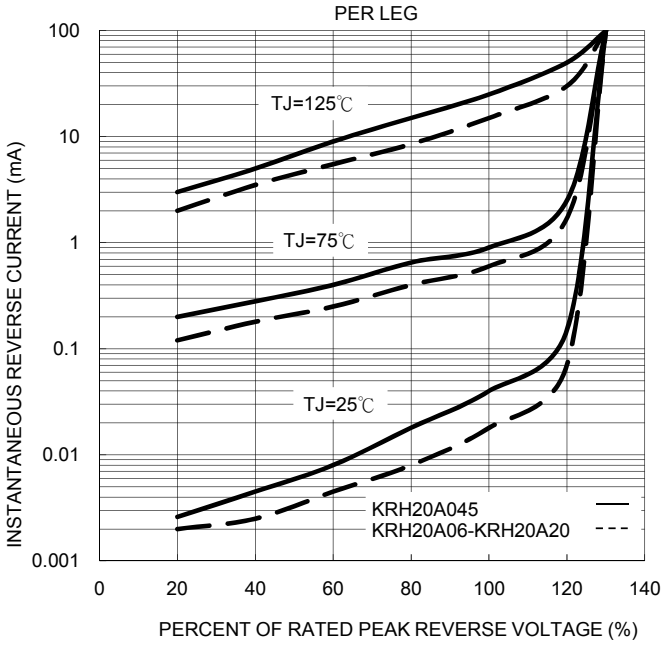


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

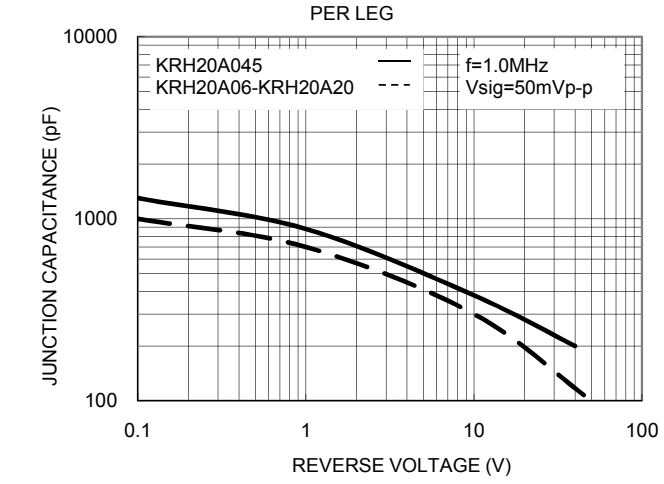


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG