

Pb Free Plating Product

FCH20A045/FCH20A06/FCH20A10/FCH20A15/FCH20A20



20.0 Ampere Insulated Dual Common Cathode 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

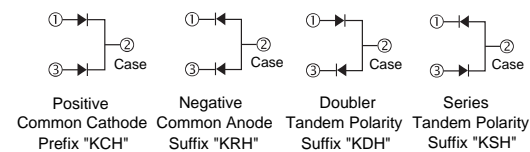
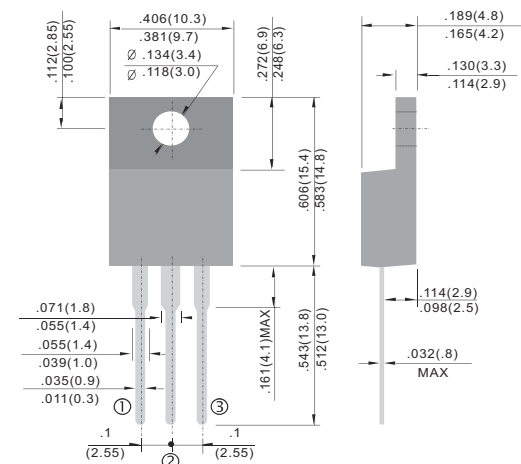
- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	KCH 20A045	KCH 20A06	KCH 20A10	KCH 20A15	KCH 20A20	UNIT
Marking code		KCH20A045	KCH20A06	KCH20A10	KCH20A15	KCH20A20	
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) $I_F=10\text{ A}, T_J=25^\circ\text{C}$ $I_F=10\text{ A}, T_J=125^\circ\text{C}$ $I_F=20\text{ A}, T_J=25^\circ\text{C}$ $I_F=20\text{ A}, T_J=125^\circ\text{C}$	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 $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	0.1					mA
		15	10	5	2		
Voltage rate of change (Rated V_R)	dV/dt	10000					V/ μs
Isolation voltage from terminals to heatsink with $t=1.0\text{ min}$	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: $t_p = 2.0\ \mu\text{s}$, 1.0KHz

Note 2: Pulse test with $PW=300\ \mu\text{s}$, 1% duty cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

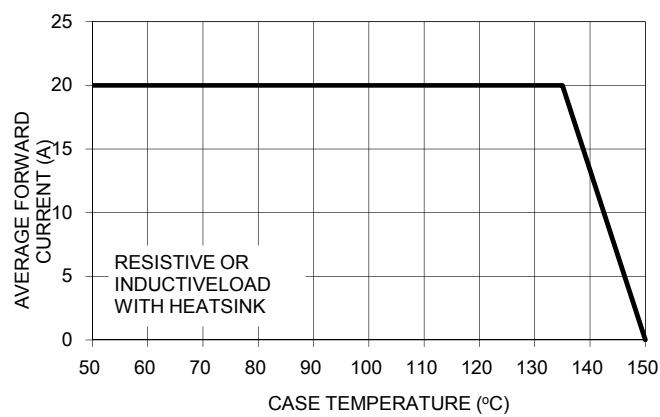


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

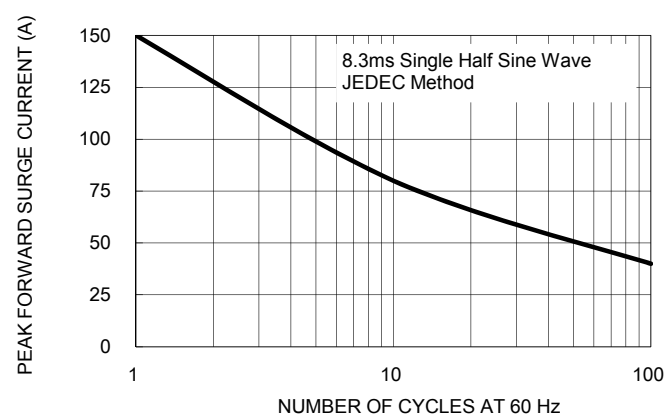


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

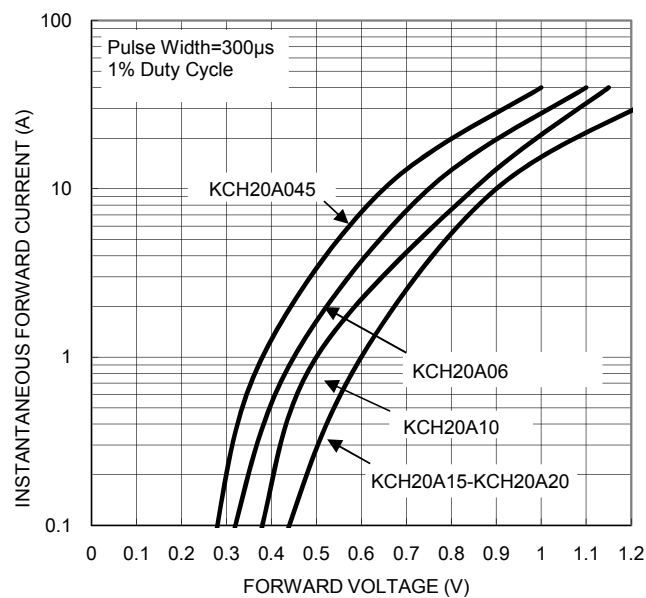


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

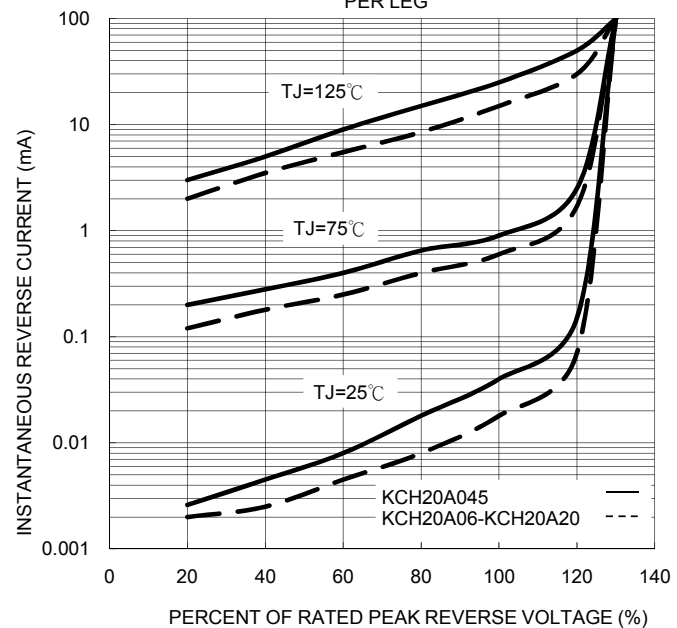


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

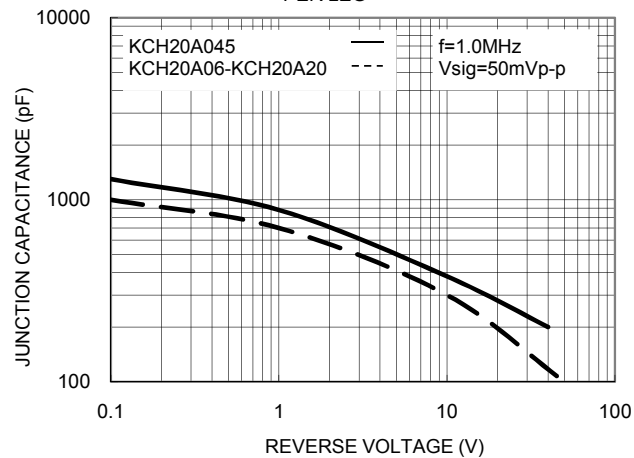


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

