THINKI SEMICONDUCTOR®

Pb Free Plating Product

FCH10A045/FCH10A06/FCH10A10/FCH10A15/FCH10A20

RoHS Pb

10.0 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

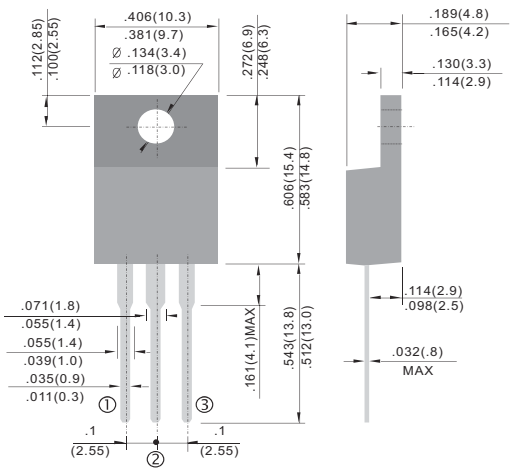
- ✶ Automotive Inverters and Solar Inverters
- ✶ Plating Power Supply,SMPS and UPS
- ✶ Car Audio Amplifiers and Sound Device Systems

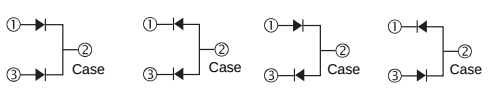
Mechanical Data

- ✶ 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℃ unless otherwise noted)							
PARAMETER	SYMBOL	KCH 10A045	KCH 10A06	KCH 10A10	KCH 10A15	KCH 10A20	UNIT
Marking code		KCH10A045	KCH10A06	KCH10A10	KCH10A15	KCH10A20	
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	$I_{F(AV)}$	10					A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I_{FRM}	10					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120					A
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1	0.5				A
Maximum instantaneous forward voltage (Note 2) I_F= 5 A, T_J=25℃ I_F= 5 A, T_J=125℃ I_F= 10 A, T_J=25℃ I_F= 10 A, T_J=125℃	V_F	 0.70 0.57 0.80 0.67	 0.80 0.65 0.90 0.75	 0.85 0.75 0.95 0.85	 0.88 0.78 0.98 0.88		V
Maximum reverse current @ rated VR T_J=25 ℃	I_R	0.1					mA
T_J=125 ℃		15	10	2	5		
Voltage rate of change (Rated V_R)	dV/dt	10000					V/μs
Typical thermal resistance	$R_{\theta JC}$	1.5					℃ / 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

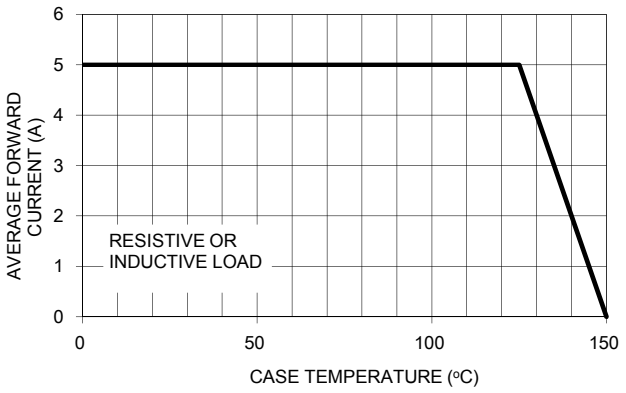


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

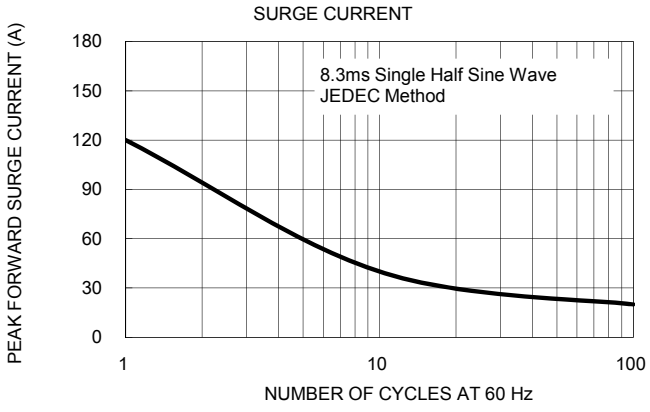


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

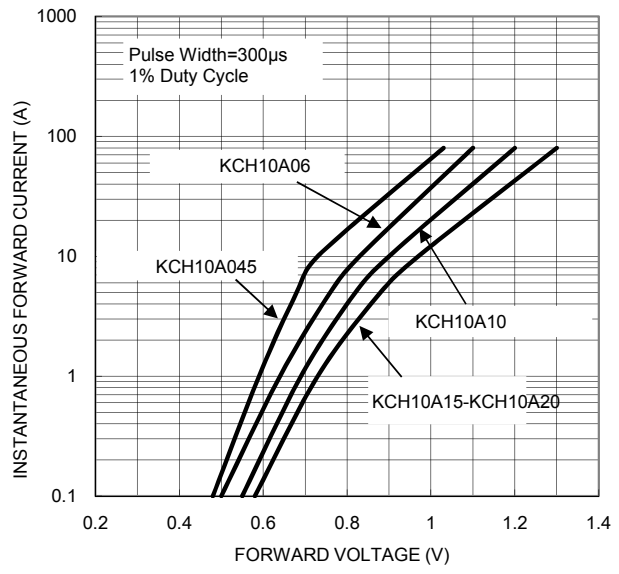


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

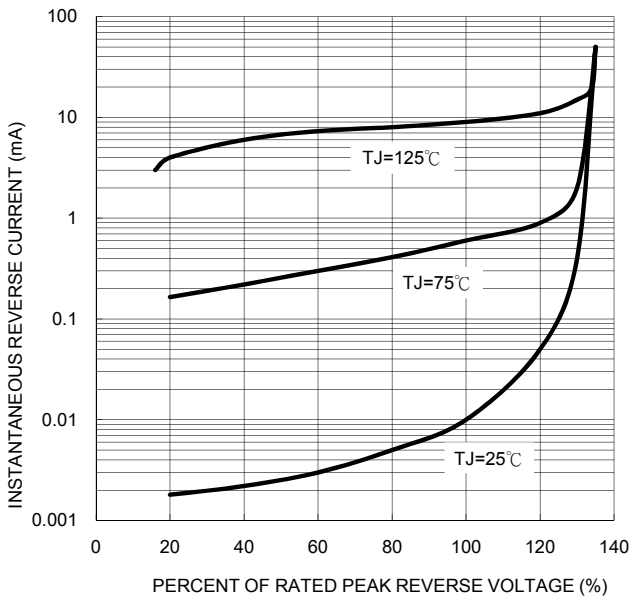


FIG. 5- TYPICAL JUNCTION CAPACITANCE

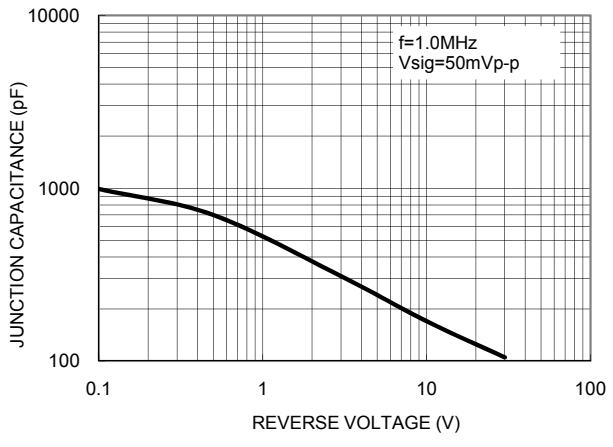


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG