

General Purpose Silicon Rectifiers

Reverse Voltage: 100 to 1000 Volts

Forward Current: 20.0 Ampere

RoHS Device

Halogen Free

Features

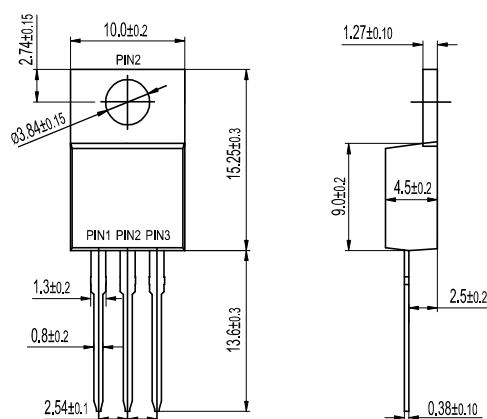
- Glass passivated chip junctions
- Low reverse current operation
- High Junction Temperature
- High Forward Surge Capability
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical data

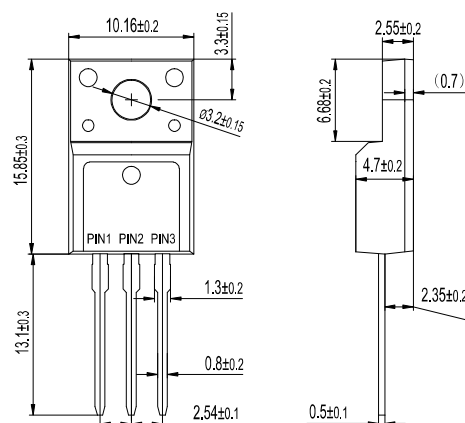
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams
ITO-220AB 1.70 grams

Package outline

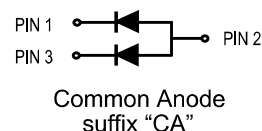
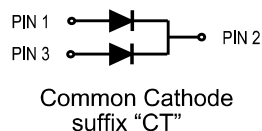
Dimensions in millimeters



TO-220AB
DR20XXCT
DR20XXCA



ITO-220AB
DR20XXFCT
DR20XXFCA



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20%

Parameter	Symbol	DR2001 CT/CA FCT/FCA	DR2002 CT/CA FCT/FCA	DR2004 CT/CA FCT/FCA	DR2006 CT/CA FCT/FCA	DR2008 CT/CA FCT/FCA	DR2010 CT/CA FCT/FCA	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	100	200	400	600	800	1000	V
Maximum average forward current per device per diode	I_{AV}	20 10						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300						A
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	TO-220AB ITO-220AB 2.5 4.0						°C/W
Operating junction temperature range	T_J	-55 ~ +150						°C
Storage temperature range	T_{stg}	-55 ~ +150						°C
Characteristics	Symbol	DR2001 CT/CA FCT/FCA	DR2002 CT/CA FCT/FCA	DR2004 CT/CA FCT/FCA	DR2006 CT/CA FCT/FCA	DR2008 CT/CA FCT/FCA	DR2010 CT/CA FCT/FCA	Unit
Maximum instantaneous forward voltage at specified current	V_F	1.1						V
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$ 5.0 250						μA

Notes: 1. Thermal resistance from junction to case.

Rating and Characteristic Curves

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

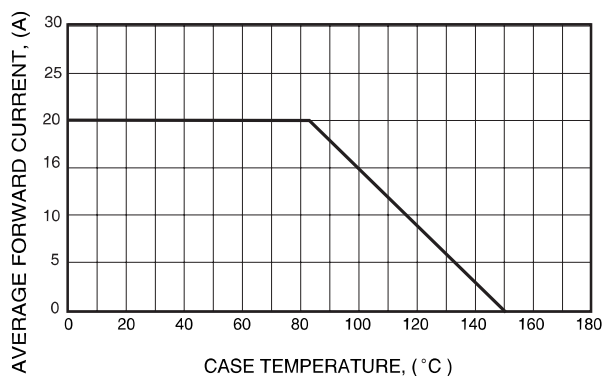


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

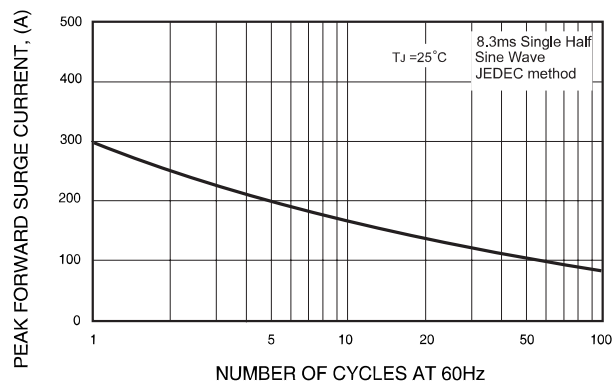


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

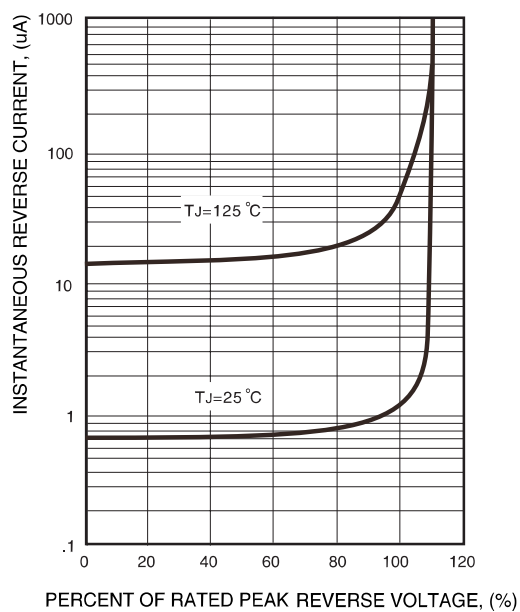
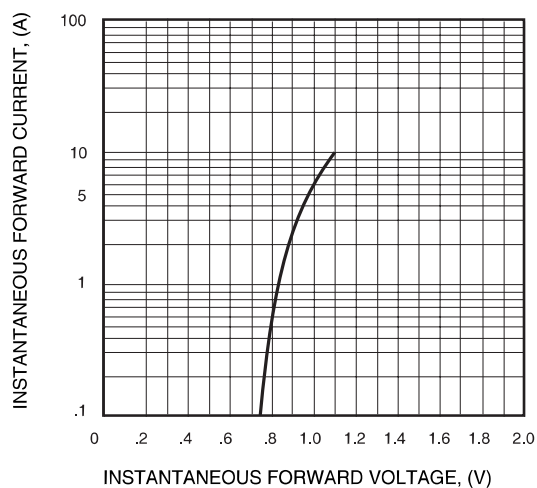
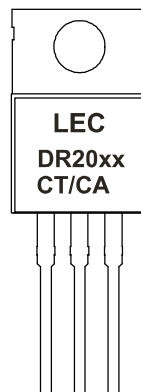


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
TO-220AB	50	1,000



Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
ITO-220AB	50	1,000

