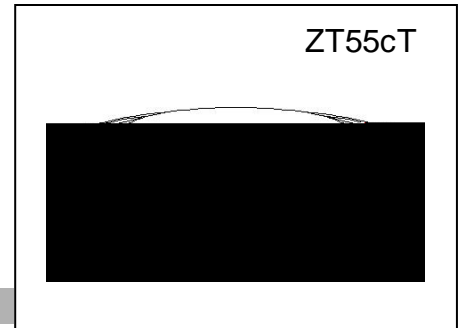




FAST RECOVERY RECTIFIER DIODE

Features:

- . All diffused structure
- . High surge rating
- . Blocking capability up to 3000 volts
- . Soft recovery
- . Ceramic housing hermetic package
- . Pressure assembled device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V _{RRM} (1)	V _{RSM} (1)
ZK1000-20	2000	2200
ZK1000-22	2200	2400
ZK1000-24	2400	2600
ZK1000-26	2600	2800
ZK1000-28	2800	3000
ZK1000-30	3000	3200

V_{RRM} = Repetitive peak reverse voltage

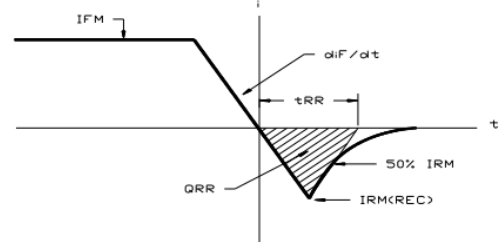
V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage current	I _{RRM}	15 mA 50 mA (3)
---	------------------	--------------------

Notes:

All ratings are specified for T_j=25 °C, unless otherwise stated

- (1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +125°C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for T_j = 125°C.
- (4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average forward current	I _{F(AV)}		1000		A	Sinewave 180°, T _c = 70 °C
RMS forward current	I _{FRMS}		1570		A	
Peak one cycle surge (non repetitive) current	I _{FSM}		15000		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 125 °C
I square t	I ² t		1125000		A ² s	8.3 msec and 10.0 msec
Peak forward voltage	V _{FM}		2.60		V	I _{FM} = 3000A; Duty cycle 0.01%
Reverse Recovery Current (4)	I _{RM(REC)}		*		A	I _{FM} = 1000 A; diF/dt = 10 A/ s; T _j max
Reverse Recovery Charge (4)	Q _{rr}		*		C	I _{FM} = 1000 A; diF/dt = 10 A/ s; T _j max
Reverse Recovery Time (4)	t _{rr}		8		s	I _{FM} = 1000 A; diF/dt = 10 A/ s; T _j max

* For guaranteed maximum values, contact factory

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		°C	
Storage temperature	T_{stg}	-40	+140		°C	
Thermal resistance - junction to case	$R_{-c)}$		0.022		°C/W	Double sided cooled (1) @ 2000 lb.; (2) @800 lb.
Thermal resistance - junction to case	$R_{-c)}$		0.044		°C/W	Single sided cooled (1) @ 2000 lb.; (2) @800 lb.
Thermal resistance - case to heatsink	$R_{-s)}$		0.005 0.010		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P			25	kN	
Weight	W			460	g	

* Mounting surfaces smooth, flat and greaseless

CASE OUTLINE AND DIMENSIONS

