

(CRT HORIZONTAL DEFLECTION) HIGH VOLTAGE DAMPER DIODE

TENTATIVE DATASHEET

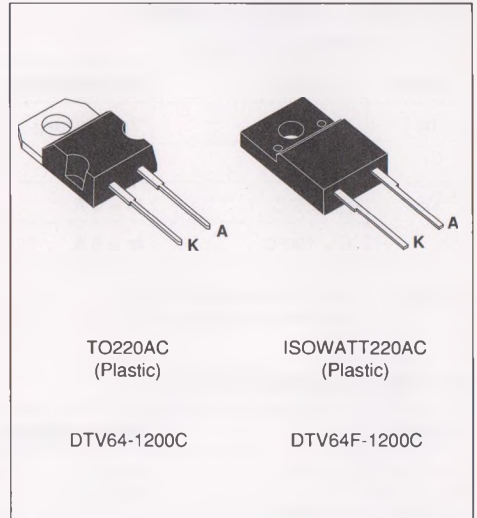
FEATURES

- HIGH BREAKDOWN VOLTAGE CAPABILITY
- MEDIUM & HIGH FREQUENCY OPERATION
- SPECIFIED TURN ON SWITCHING CHARACTERISTICS
- TYPICAL TOTAL LOSSES : 3 W
($I_{Fpeak} = 6 \text{ A}$, $F = 64 \text{ kHz}$)
- SUITABLE WITH **BUH** TRANSISTORS SERIES
- INSULATED VERSION (ISOWATT220AC) :
Insulating voltage = 2000 V DC
Capacitance = 12 pF

DESCRIPTION

High voltage diode especially designed for horizontal deflection stage in standard and high resolution displays for TV's and monitors.

This device is packaged in TO220AC or ISOWATT220AC.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value	Unit	
V_{RRM}	Repetitive peak reverse voltage		1200	V	
V_{RWM}	Repetitive working voltage		1200	V	
$I_{F(RMS)}$	RMS forward current		20	A	
$I_{F(AV)}$	Average forward current $\delta = 0.5$	TO220AC	$T_c = 120^\circ\text{C}$	6	A
		ISOWATT220AC	$T_c = 90^\circ\text{C}$	6	
I_{FSM}	Surge non repetitive forward current		$t_p = 10\text{ms}$ sinusoidal	100	A
T_{stg} T_j	Storage and junction temperature range		- 40 to + 150 - 40 to + 150	$^\circ\text{C}$ $^\circ\text{C}$	

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
Rth (j-c)	Junction to case	TO220AC	2.2	°C/W
		ISOWATT220AC	5.0	

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I _R *	T _j = 25°C	V _R = V _{RWM}			200	μA
	T _j = 100°C				2.0	mA
V _F **	T _j = 25°C	I _F = 6 A			2.0	V
	T _j = 100°C	I _F = 6 A			1.8	

Pulse test : * tp = 5 ms, duty cycle < 2 %

** tp = 380 μs, duty cycle < 2 %

RECOVERY CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
trr (1)	T _j = 25°C	I _F = 1 A V _R = 30 V			100	ns
trr (1)	T _j = 100°C					
trr	T _j = 25°C	I _F = 100mA	I _R = 100mA		70	ns

TURN ON SWITCHING CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
t _{FR} (2)	T _j = 100°C	I _F = 6 A		0.5		μs
V _{FP} (2)		V _{FR} = 1.1 x V _F				

(1) Test following Jedec Standard

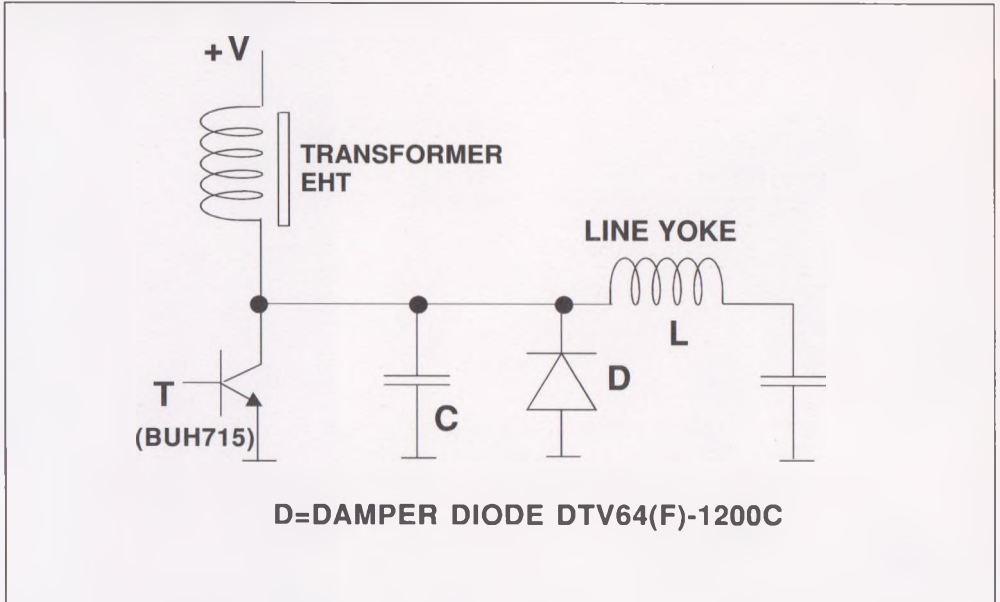
(2) Test representative of the application

To evaluate the conduction losses use the following equations :

$$V_F = 1.5 + 0.050 I_F$$

$$P = 1.5 \times I_{F(AV)} + 0.050 \times I_F^2 (RMS)$$

BASIC HORIZONTAL DEFLECTION CIRCUIT



BASIC E-W DIODE MODULATOR CIRCUIT

