

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07957

D T-33-13

2SD1425

SILICON NPN TRIPLE DIFFUSED MESA TYPE

COLOR TV HORIZONTAL OUTPUT APPLICATIONS.

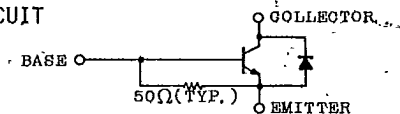
FEATURES:

- High Voltage : $V_{CBO}=1500V$
- Low Saturation Voltage : $V_{CE(sat)}=5V(Typ.)$ ($I_C=2A$, $I_B=0.6A$)
- High Speed : $t_f=1.0\mu s(Max.)$ ($I_{CP}=2A$, $I_{BI(end)}=0.6A$)
- Built-in Damper Type
- Glass Passivated Collector-Base Junction

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

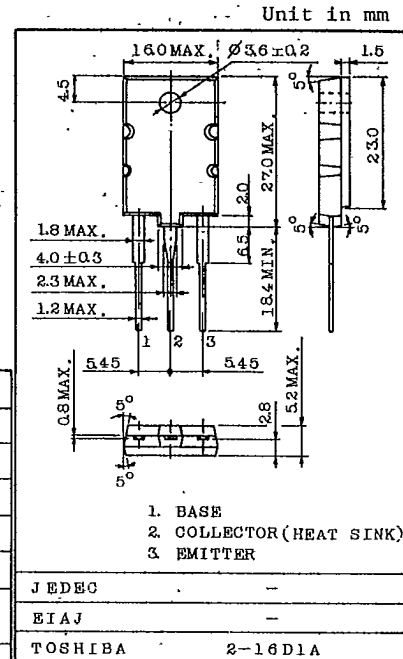
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	1500	V
Collector-Emitter Voltage	V _{CE0}	600	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	2.5	A
Emitter Current	I _E	-2.5	A
Collector Power Dissipation (T _c =25°C)	P _C	80	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=500V, I_E=0$	–	–	10	μA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=200mA, I_C=0$	5	–	–	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=0.5A$	8	12	–	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2A, I_B=0.6A$	–	5	8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2A, I_B=0.6A$	–	–	1.5	V
Forward Voltage (Damper Diode)	$-V_F$	$I_F=2.5A$	–	1.6	2.0	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=0.1A$	–	3	–	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	–	95	–	pF
Fall Time (Fig.)	t_f	$I_{CP}=2A, I_{B1}(end)=0.6A$	–	0.5	1.0	μs



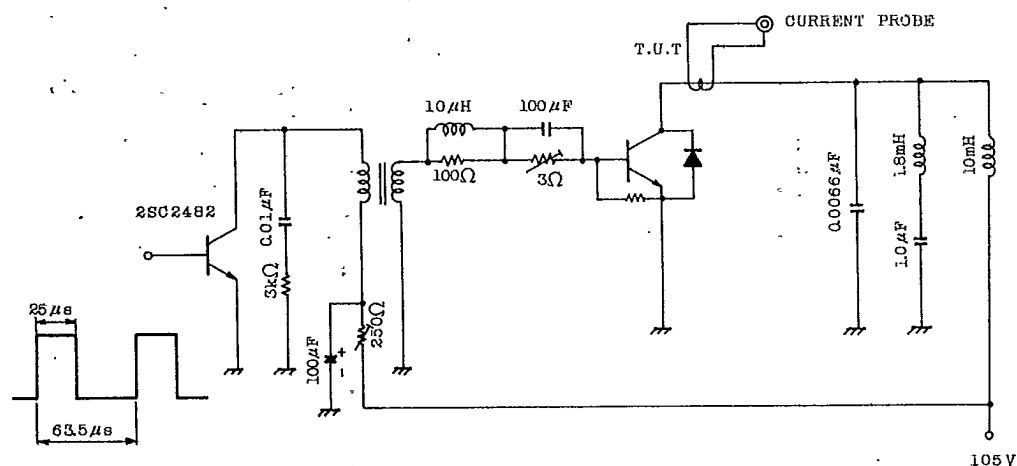
Weight : 5.2g

TOSHIBA CORPORATION

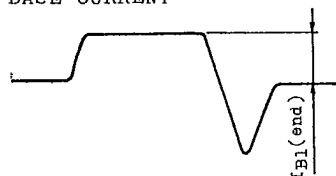
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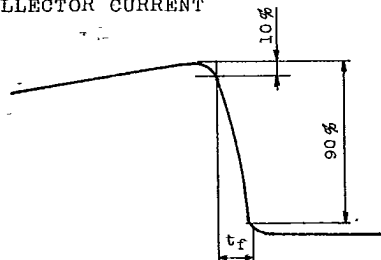
Fig. 1f TEST CIRCUIT



BASE CURRENT



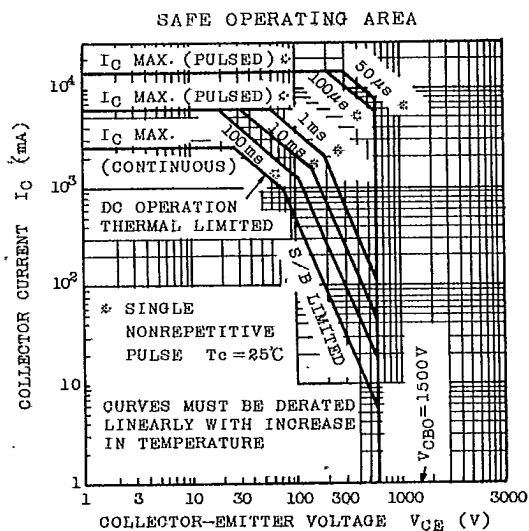
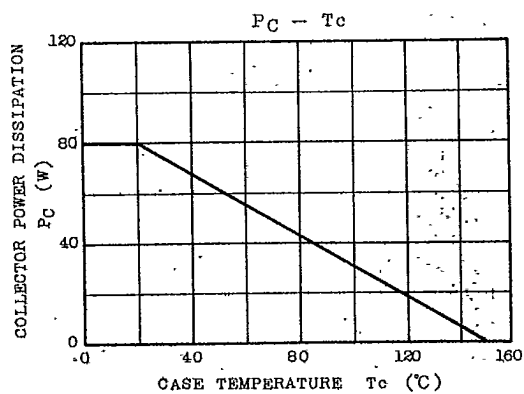
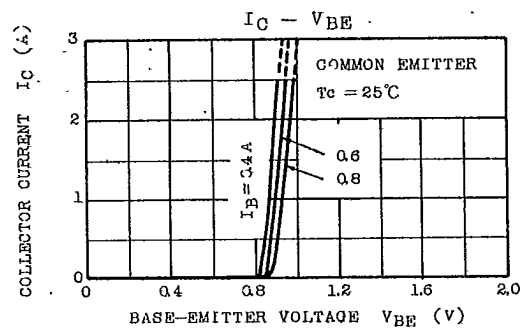
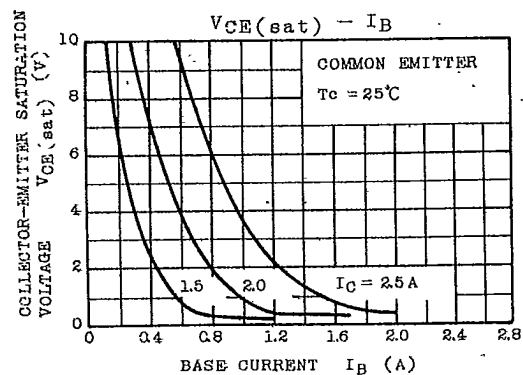
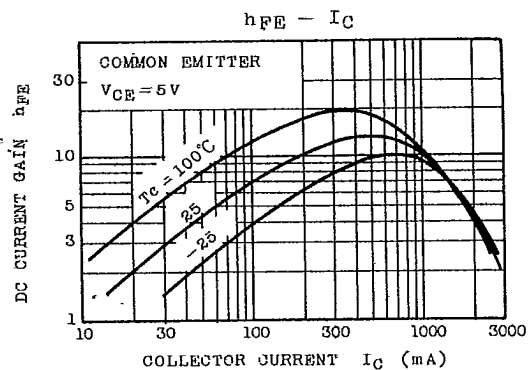
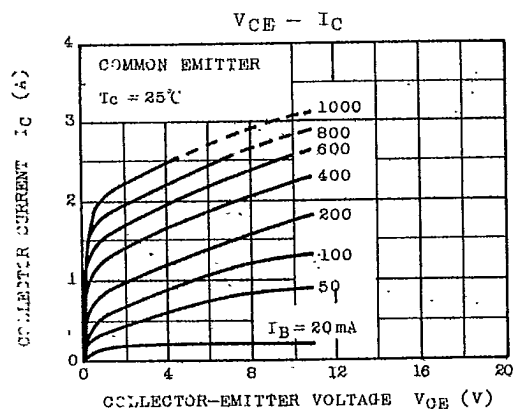
COLLECTOR CURRENT



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