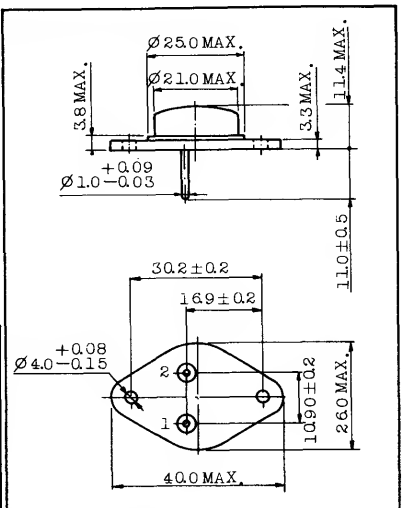
SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD868

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=1.0μs(Max.) (I_{CP}=2A, $I_{B1(end)}$=0.6A)
- Built-in Damper Type
- Glass Passivated Collector-Base Junction.

Unit in mm



1. BASE
2. EMITTER
COLLECTOR(CASE)

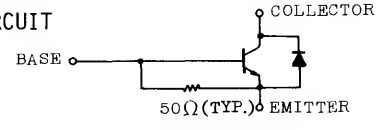
JEDEC	TO-3
EIAJ	TC-3, TB-3
TOSHIBA	2-21B1A

Mounting Kit No. AC42C
Weight : 17g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1500	V
Collector-Emitter Voltage	V_{CEO}	600	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2.5	A
Emitter Current	I_E	-2.5	A
Collector Power Dissipation (Tc=25°C)	P_C	50	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-65~150	°C

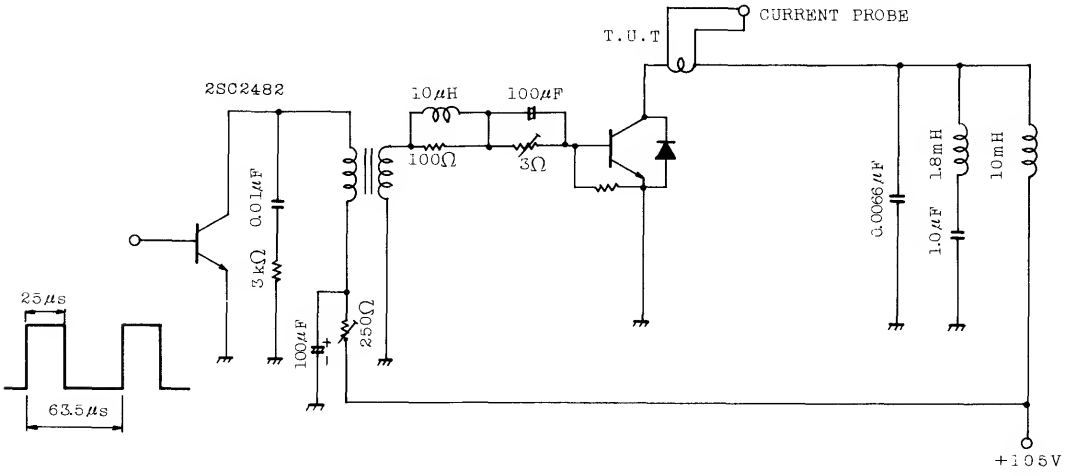
EQUIVALENT CIRCUIT

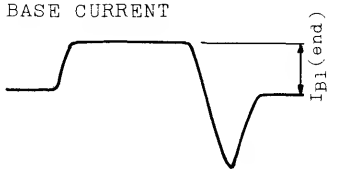


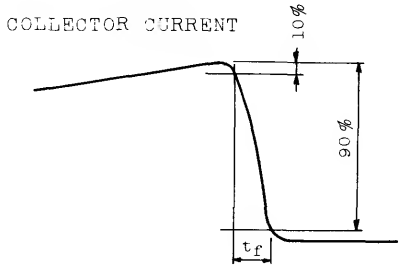
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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	t_f	I_{CP}=2A, $I_{B1(end)}$=0.6A	-	0.5	1.0	μs

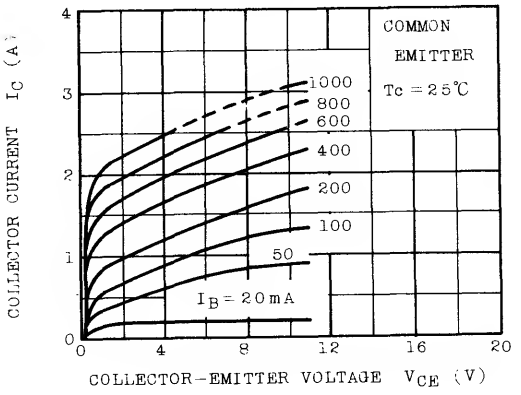
t_f TEST CIRCUIT



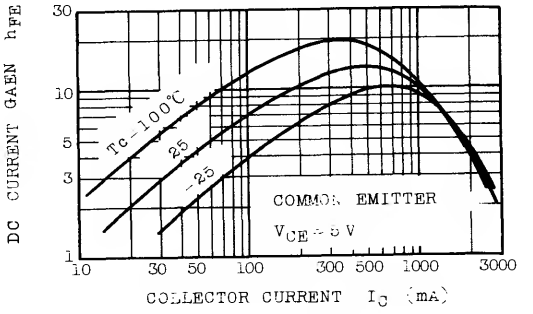




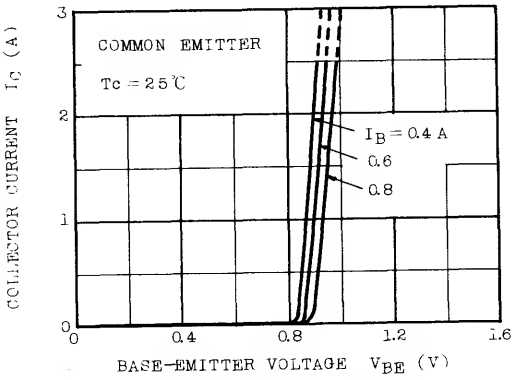
$V_{CE} - I_C$



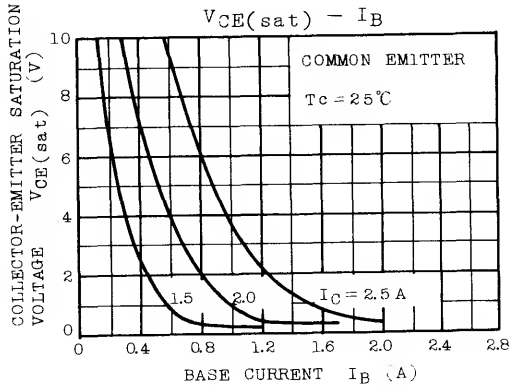
$h_{FE} - I_C$



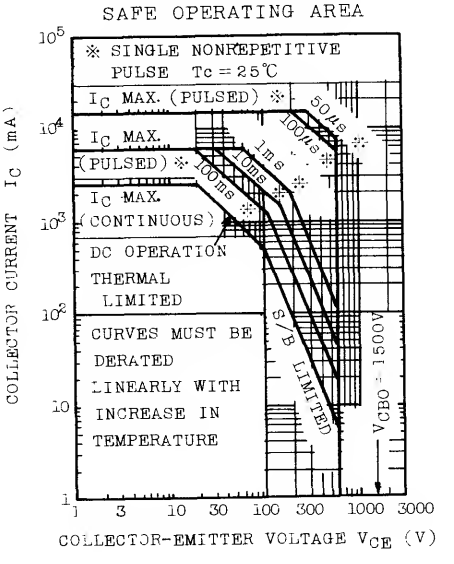
$I_C - V_{BE}$



$V_{CE(sat)} - I_B$



SAFE OPERATING AREA



$P_C - T_C$