2SD818

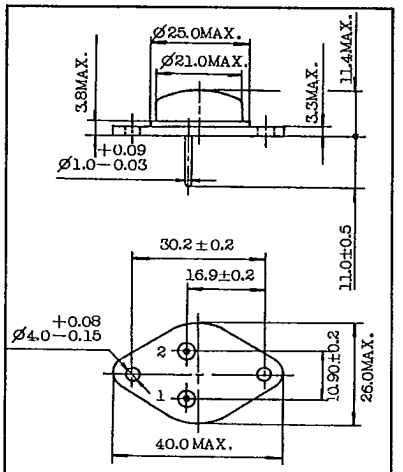
SILICON NPN TRIPLE DIFFUSED MESA TYPE

COLOR TV HORIZONTAL OUTPUT APPLICATIONS.

FEATURES:

- High Voltage : V_{CBO}=1500V
- Low Saturation Voltage : $V_{CE(sat)}$=4V (Typ.)
- High speed : t_f=0.5μs (Typ.)
- 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

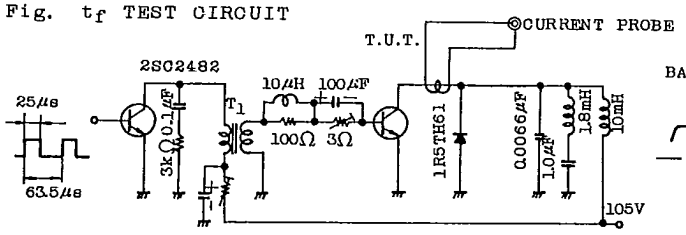
MAXIMUM RATINGS (Ta=25°C)

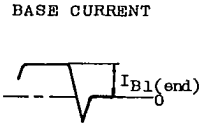
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector Base Voltage	V_{CBO}	1500	V
Collector Emitter Voltage	V_{CEO}	600	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2.5	A
Emitter Current	I_E	-2.5	A
Collector Power Dissipation (T_C=25°C)	P_C	50	W
Junction Temperature	T_j	150	°C
Storage Temperature Range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

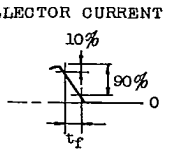
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=500V, I_E=0	-	-	10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	1	mA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=0.5A	8	20	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2.0A, I_B=0.6A	-	4	8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=2.0A, I_B=0.6A	-	-	1.5	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}=2.0A, $I_{B1(end)}$=0.6A(Fig.)	-	0.5	1.0	μs

Fig. t_f TEST CIRCUIT







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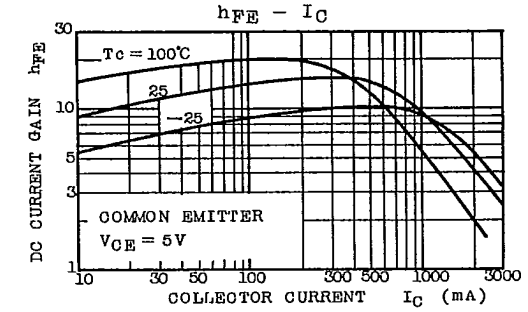
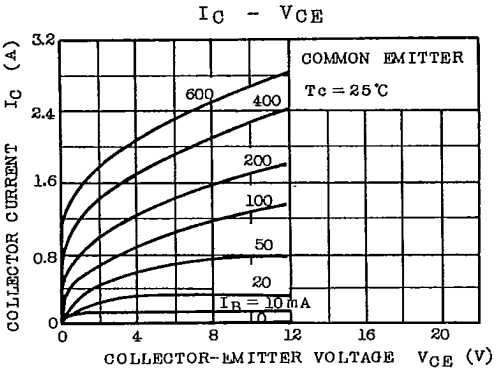
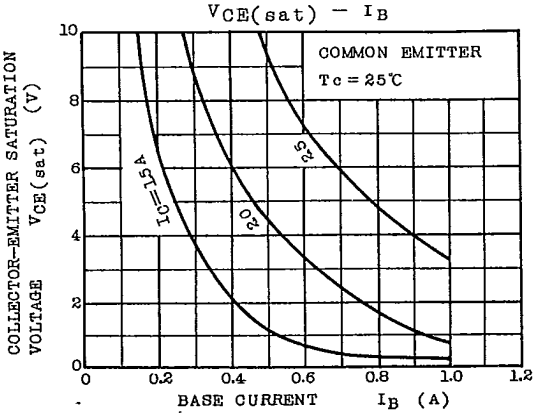
h_{FE} – I_C



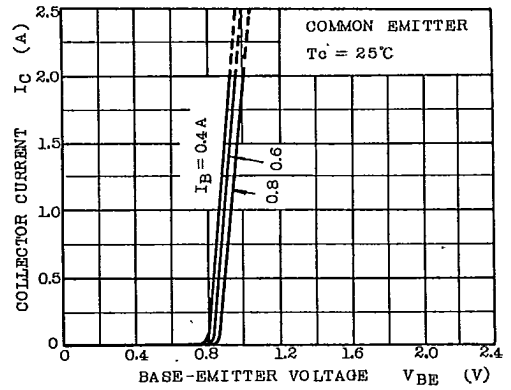
I_C – V_{CE}



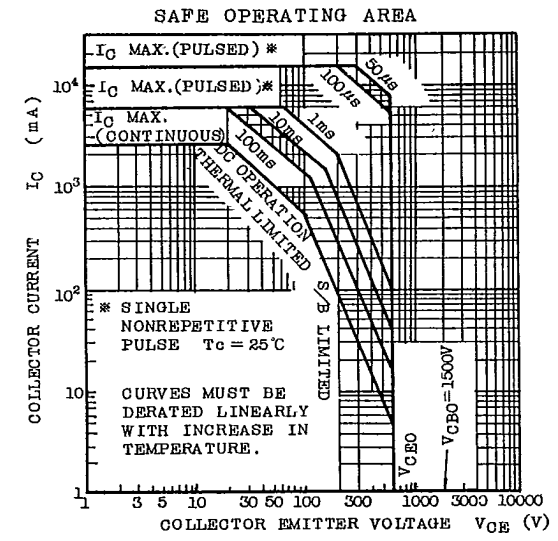
$V_{CE(sat)}$ – I_B



I_C – V_{BE}



SAFE OPERATING AREA



P_C – Tc