2SD1208

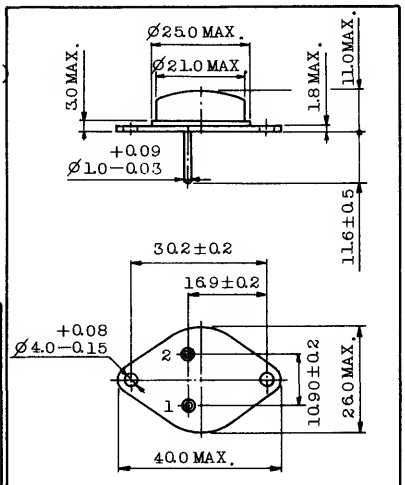
SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

POWER REGULATOR FOR LINE OPERATED TV.

Unit in mm

FEATURES:

- Excellent Wide Safe Operating Area (100W.Sec at Tc=25°C)
- Included Abalanche Diode : V_Z=60±15V
- High DC Current Gain : h_{FE}=2000 ~ 20000
- Darlington Connected Type.



1. BASE
2. EMITTER
COLLECTOR (CASE)

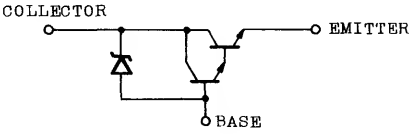
JEDEC	TO−3
EIAJ	TC−3 , TB−3
TOSHIBA	2−21A1A

Weight : 12.0g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60±15	V
Collector-Emitter Voltage	V_{CEO}	60±15	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current(Continous)	I_C	5	A
Collector Current (Peak)	I_{CP}	20	A
Collector Power Dissipation (Tc=25°C)	P_C	100	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-65 ~ 150	°C

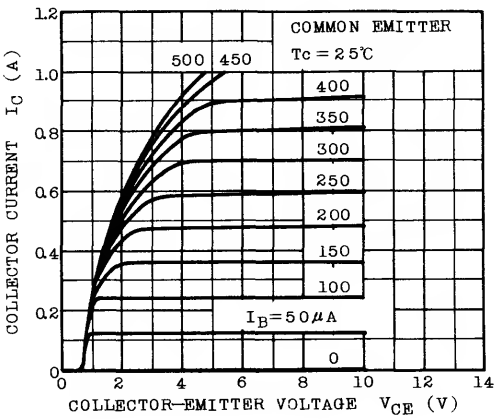
EQUIVALENT CIRCUIT



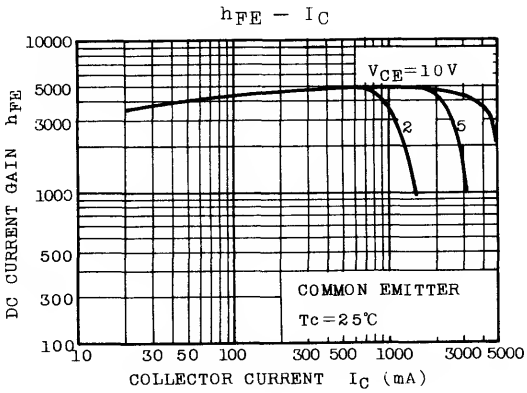
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10mA, I_E=0	45	60	75	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=100mA, I_B=0	45	60	75	V
Emitter Cut-off Current	I_{EBO}	V_{EB}=6V, I_C=0	-	-	100	μA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=0.5A	2000	-	20000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$ (1)	I_C=0.5A, I_B=1mA	-	-	1.5	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$ (2)	I_C=1A, I_B=1mA	-	-	2.5	V
Base-Emitter Voltage	V_{BE}	V_{CE}=5V, I_C=0.5A	-	-	1.8	V
Allowable Energy (Tc=25°C)	E_T	Application Circuit	100	-	-	W·sec

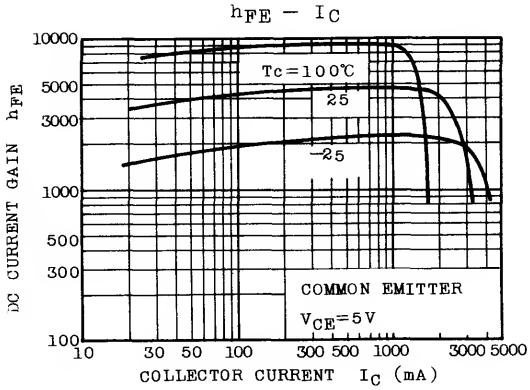
$V_{CE} - I_C$



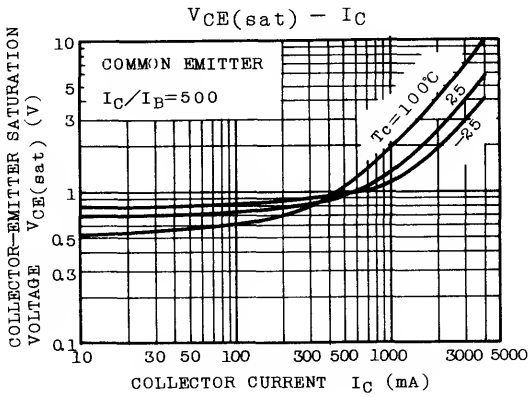
$h_{FE} - I_C$



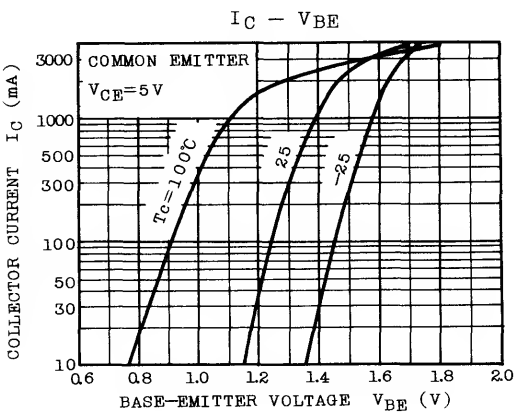
$h_{FE} - I_C$



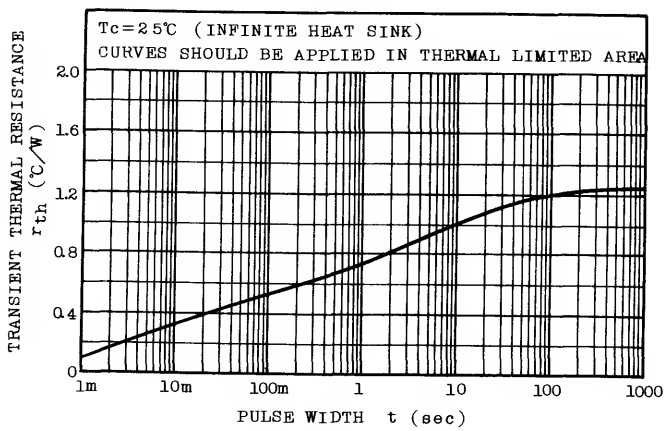
$V_{CE(sat)} - I_C$



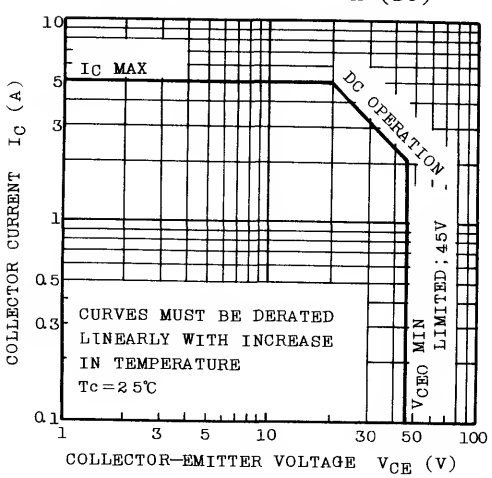
$I_C - V_{BE}$



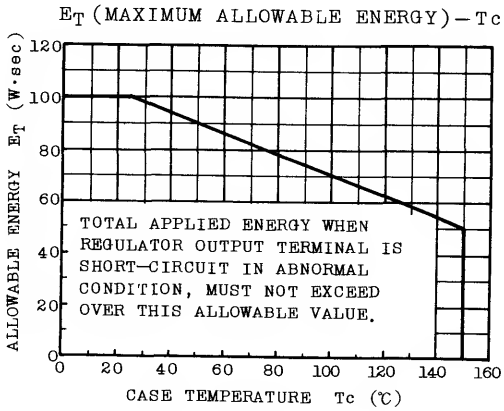
r_{th} – t



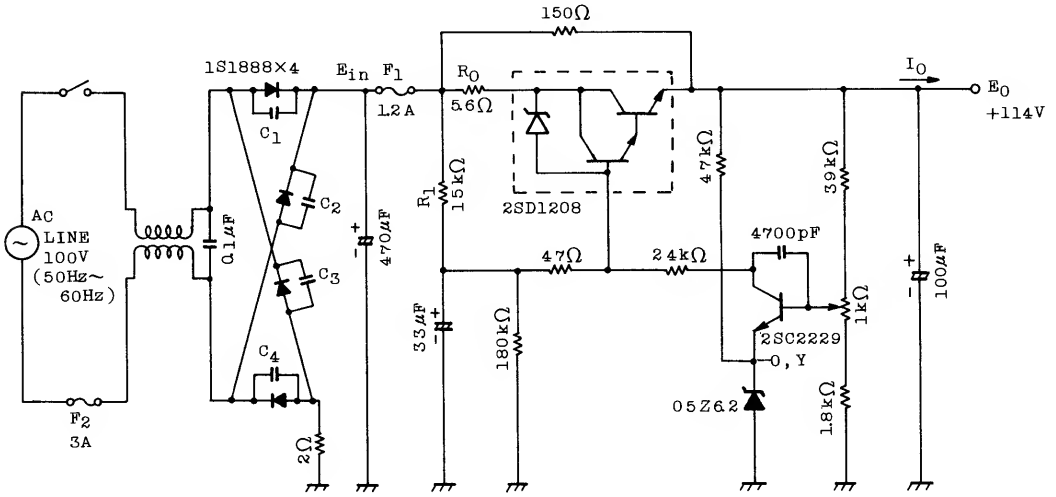
SAFE OPERATING AREA (DC)



E_T (MAXIMUM ALLOWABLE ENERGY) – Tc

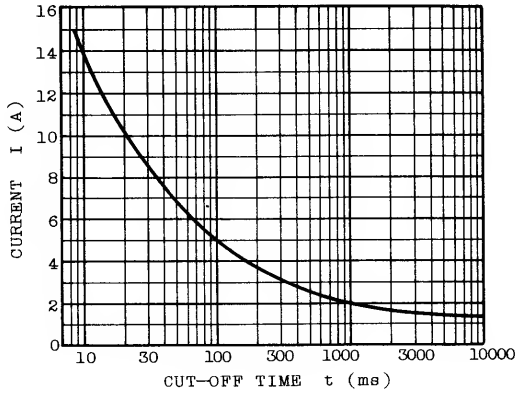


APPLICATION CIRCUIT

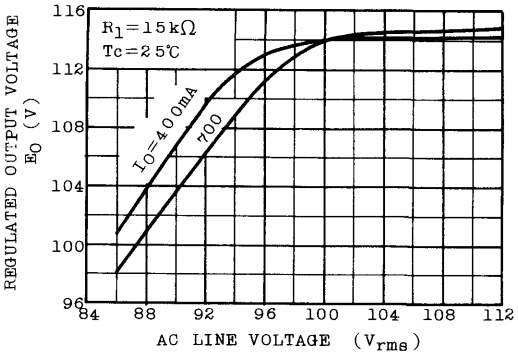


C_1, C_2, C_3, C_4 : 0.0047μF

FUSE F_1 ; I – t CHARACTERISTIC



AC LINE VOLTAGE — E_O



P_C — Ta