

SILICON NPN TRIPLE  
DIFFUSED MESA TYPE

# S2000A (Similar to BU508A)

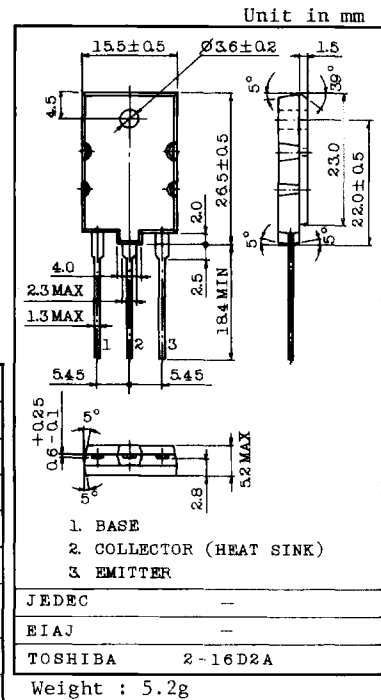
COLOR TV HORIZONTAL OUTPUT APPLICATIONS.  
COLOR TV SWITCHING REGULATOR APPLICATIONS.

**FEATURES:**

- . High Voltage :  $V_{CES}=1500V$
- . Low Saturation Voltage :  $V_{CE(sat)}=1V$  (Max.)
- . Fall Time :  $t_f=0.7\mu s$  (Typ.)
- . Glass Passivated Collector-Base Junction

**MAXIMUM RATINGS ( $T_a=25^\circ C$ )**

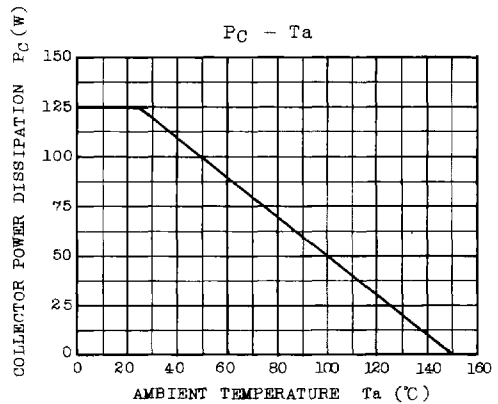
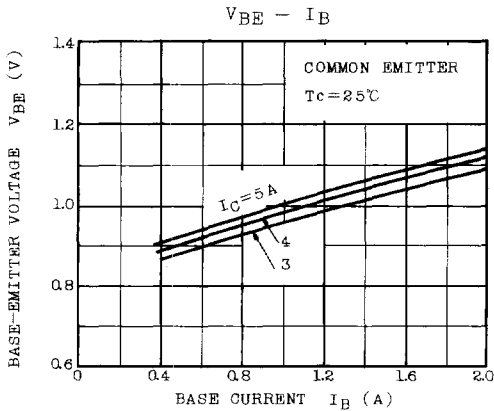
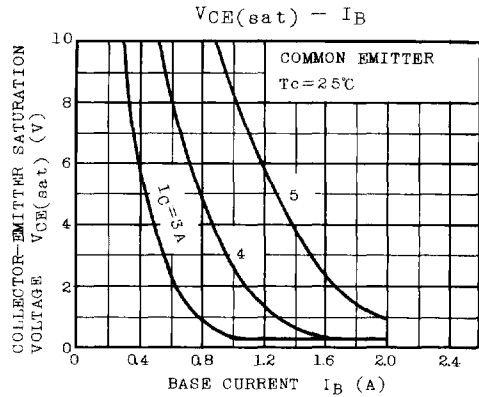
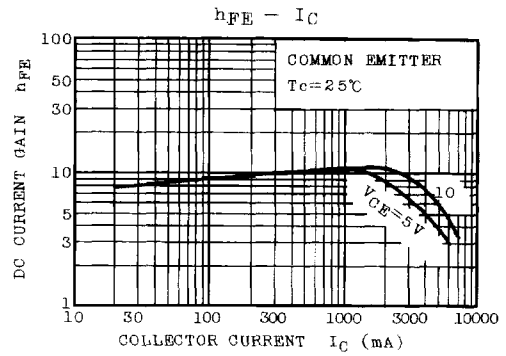
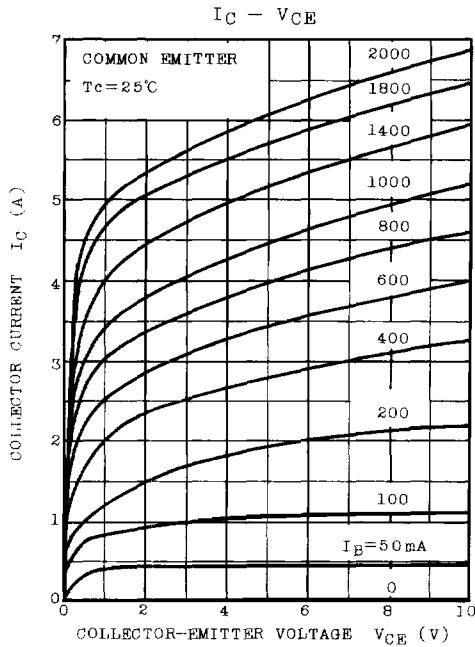
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	$V_{CES}$	1500	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	DC	$I_C$	8 A
	Peak	$I_{CM}$	15 A
Base Current (Peak)	$I_{BM}$	6	A
Total Power Dissipation ( $T_c=25^\circ C$ )	$P_{tot}$	125	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ C$
Thermal Resistance	$R_{th(j-c)}$	1.0	$^\circ C/W$



**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CES}$	$V_{CE}=1500V, R_{BE}=0$	—	—	1	mA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	5	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, V_{BE}=0$	700	—	—	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4.5A, I_B=2A$	—	—	1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4.5A, I_B=2A$	—	—	1.5	V
Collector-Emitter Sustaining Voltage	$V_{CEX(SUS)}$	$I_C=500mA, V_{BE}=-1.7V, L=40mH$	700	—	—	V
Transition Frequency	$f_T$	$V_{CE}=5V, I_C=0.1A$	—	3	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	—	125	—	pF
Switching Time	Fall Time	$t_f$	—	0.7	—	$\mu s$
	Storage Time	$t_{stg}$	—	10	—	$\mu s$

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