S2000

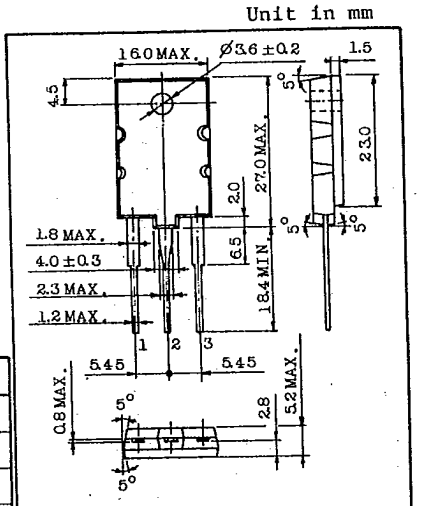
SILICON NPN TRIPLE DIFFUSED MESA TYPE

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

FEATURES:

- High Voltage : V_{CES}=1500V
- Low Saturation Voltage : $V_{CE(sat)}$=5V (Max.)
- Fall Time : t_f=0.7μs (Typ.)
- Glass Passivated Collector-Base Junction

Unit in mm



1. BASE
2. COLLECTOR(HEAT SINK)
3. EMITTER

JEDEC	–
EIAJ	–
TOSHIBA	2-16D1A

Weight : 5.2g

MAXIMUM RATINGS (Ta=25°C)

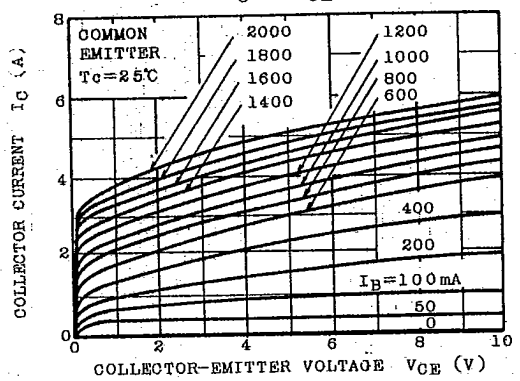
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	1500	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	5	A
	Peak	I_{CM}	7.5	A
Base Current (Peak)		I_{BM}	4	A
Total Power Dissipation ($T_C \leqq 95°C$)		P_{tot}	12.5	W
Junction Temperature		T_j	+115	°C
Storage Temperature Range		T_{stg}	-55 ~ 115	°C
Thermal Resistance		$R_{th(j-c)}$	1.6	°C/W

ELECTRICAL CHARACTERISTICS (Ta=25°C)

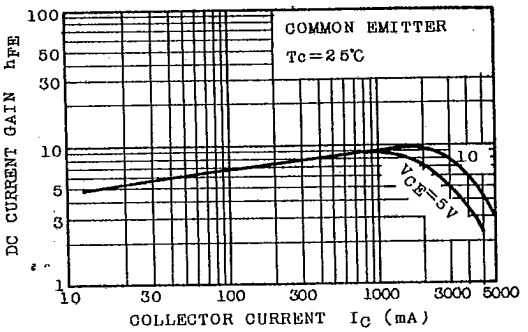
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CES}	V_{CE}=1500V, V_{BE}=0	–	–	1	mA
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=1mA, I_C=0	5	–	–	V
DC Current Gain		h_{FE}	V_{CE}=5V, I_C=4.5A	2.25	–	–	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=4.5A, I_B=2A	–	–	5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=4.5A, I_B=2A	–	–	1.5	V
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	I_C=100mA, I_B=0, L=25mH	700	–	–	V
Transition Frequency		f_T	V_{CE}=5V, I_C=0.1A	–	7	–	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	–	125	–	pF
Switching Time	Fall Time	t_f	I_{CM}=4.5A, $I_{B(end)}$=1.8A	–	0.7	–	μs
	Storage Time	t_{stg}	I_{CM}=4.5A, $I_{B(end)}$=1.8A	–	10	–	μs

S2000

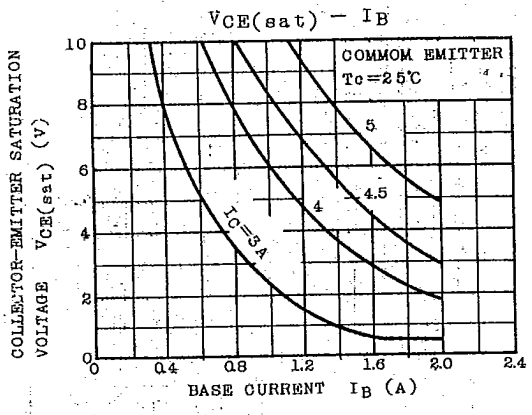
$I_C - V_{CE}$



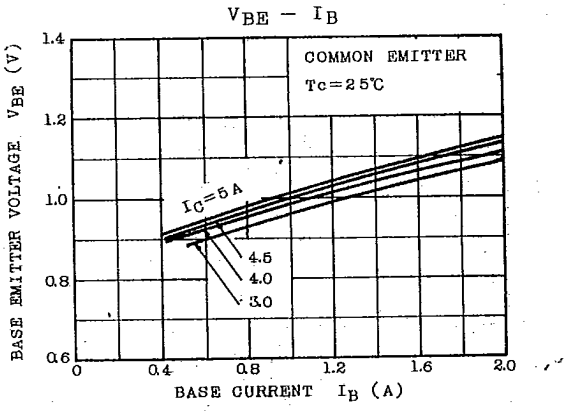
$h_{FE} - I_C$



$V_{CE(sat)} - I_B$



$V_{BE} - I_B$



$P_C - T_C$