S2054

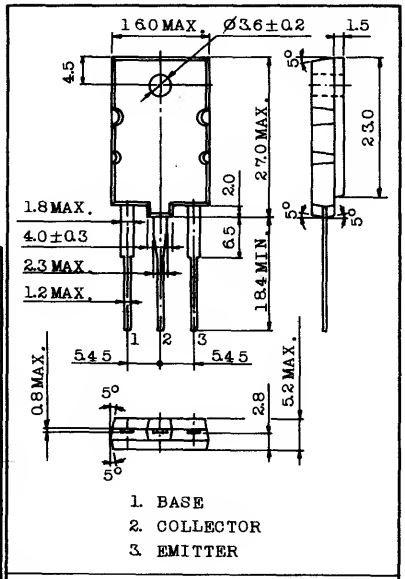
SILICON NPN TRIPLE DIFFUSED MESA TYPE

COLOR TV HORIZONTAL OUTPUT APPLICATIONS.

FEATURES:

- High Voltage : V_{CES}=1500V
- Low Saturation Voltage : $V_{CE(sat)}$=4V(Typ.)
- High Speed : t_f=0.7μs(Typ.)
- Built-in Damper Type.
- Glass Passivated Base-Collector Junction.

Unit in mm



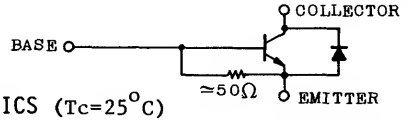
JEDEC	—
EIAJ	—
TOSHIBA	2-16D1A

Weight : 5.2g

MAXIMUM RATINGS (T_a=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	3.5	A
	Peak	I_{CM}	4	A
Base Current (Peak)		I_{BM}	2	A
Total Power Dissipation ($T_c \leqq 95°C$)		P_{tot}	10	W
Junction Temperature		T_j	+115	°C
Storage Temperature Range		T_{stg}	-65 ~ 115	°C
Thermal Resistance		$R_{th(j-c)}$	1.6	°C/W

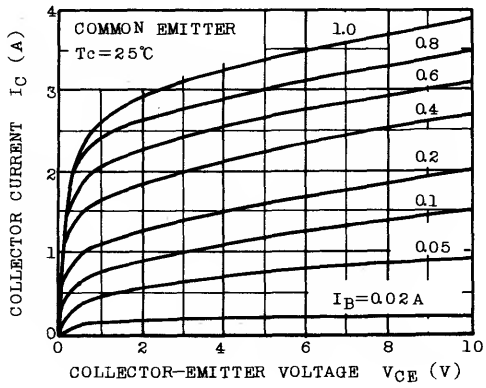
EQUIVALENT CIRCUIT



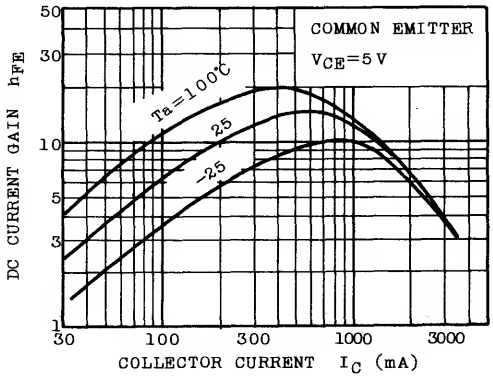
ELECTRICLAL CHARACTERISTICS (T_c=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CES}	V_{BE}=0, V_{CE}=1500V	-	-	1	mA
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	I_C=0, I_E=200mA	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=3A, I_B=0.8A	-	4	8	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=3A, I_B=0.8A	-	-	1.5	V
Forward Voltage (Diode)		$-V_F$	I_F=3.5A	-	1.4	2.0	V
Collector-Emitter Sustaining Voltage		$V_{CE(SUS)}$	I_B=0, I_C=100mA, L=25mH	700	-	-	V
Transition Frequency		f_T	V_{CE}=5V, V_{IC}=0.1A	-	7	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	95	-	pF
Switching Time	Fall Time	t_f	I_{CM}=3A, $I_{B(end)}$=0.8A	-	0.7	1.0	μs
	Storage Time	t_{stg}		-	7	-	

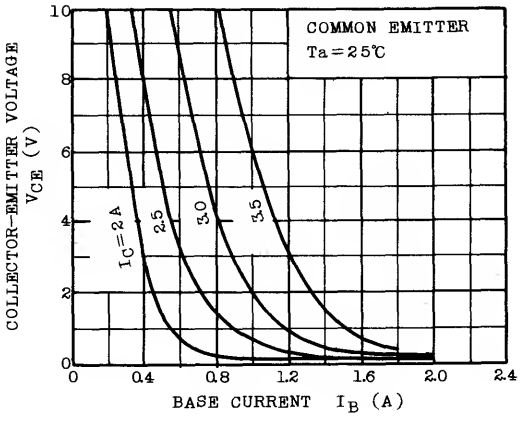
$I_C - V_{CE}$



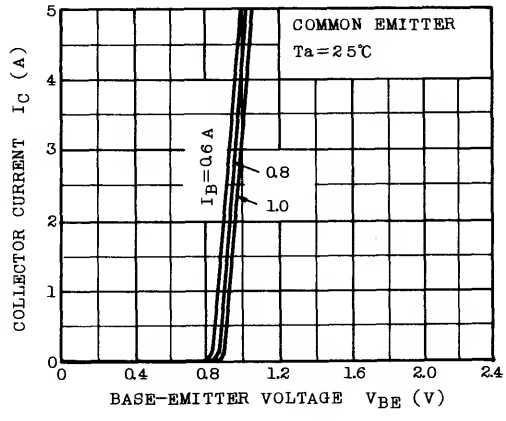
$h_{FE} - I_C$



$V_{CE} - I_B$



$I_C - V_{BE}$



$P_C - Tc$