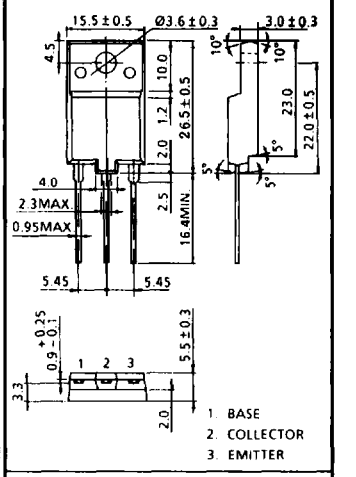
2SC5148 — SILICON NPN TRIPLE DIFFUSED MESA TYPE

HORIZONTAL DEFLECTION OUTPUT FOR MEDIUM RESOLUTION DISPLAY, COLOR TV

HIGH SPEED SWITCHING APPLICATIONS

- High Speed : $t_f = 0.2\mu s$ (Typ.)
- High Voltage : $V_{CBO} \geqq 1500V$
- Low Saturation Voltage
  : $V_{CE(sat)} = 5V$ (Max.) ($I_C = 5A$, $I_B = 1.3A$)
- Collector Metal (Fin) is Fully Covered with Mold Resin.

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-16E3A

Weight : 5.5g

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	DC	I_C	8	A
	Pulse	I_{CP}	16	
Base Current		I_B	4	A
Collector Power Dissipation (Tc = 25°C)		P_C	50	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 1500V$, $I_E = 0$	—	—	1	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 5V$, $I_C = 0$	—	—	10	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 10mA$, $I_B = 0$	600	—	—	V
DC Current Gain		h_{FE} (1)	$V_{CE} = 5V$, $I_C = 1A$	8	—	25	
		h_{FE} (2)	$V_{CE} = 5V$, $I_C = 5A$	3.8	—	8.0	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 5A$, $I_B = 1.3A$	—	—	5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 5A$, $I_B = 1.3A$	—	1.0	1.3	V
Transition Frequency		f_T	$V_{CE} = 10V$, $I_C = 0.1A$	—	2	—	MHz
Collector Output Capacitance		Cob	$V_{CB} = 10V$, $I_E = 0$, $f = 1MHz$	—	110	—	pF
Switching Time	Storage Time	t_{stg}	$I_{CP} = 4A$, I_{B1} (end) = 0.8A, $f_H = 64kHz$	—	2.5	4	μs
	Fall Time	t_f		—	0.15	0.3	