

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5570

HORIZONTAL DEFLECTION OUTPUT FOR SUPER HIGH RESOLUTION DISPLAY, COLOR TV

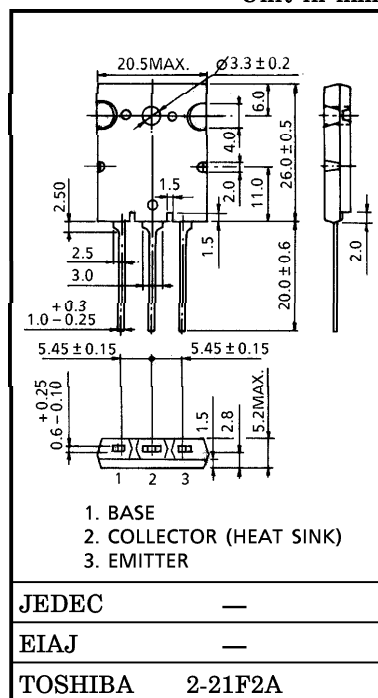
HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CB0} = 1700\text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 3\text{ V (Max.)}$
- High Speed : $t_f(2) = 0.1\ \mu\text{s (Typ.)}$

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CB0}	1700	V
Collector-Emitter Voltage		V_{CEO}	800	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	28	A
	Pulse	I_{CP}	56	
Base Current		I_B	14	A
Collector Power Dissipation ($T_c = 25^\circ\text{C}$)		P_C	220	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-21F2A

Weight : 9.75 g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1700\text{ V}, I_E = 0$	—	—	1	mA	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	100	μA	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	800	—	—	V	
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5\text{ V}, I_C = 2\text{ A}$	22	—	48		
	$h_{FE(2)}$	$V_{CE} = 5\text{ V}, I_C = 8\text{ A}$	12.5	—	25		
	$h_{FE(3)}$	$V_{CE} = 5\text{ V}, I_C = 22\text{ A}$	4.5	—	7.5		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 22\text{ A}, I_B = 5.5\text{ A}$	—	—	3	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 22\text{ A}, I_B = 5.5\text{ A}$	—	1.0	1.5	V	
Transition Frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 0.1\text{ A}$	—	2	—	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	470	—	pF	
Switching Time	Storage Time	$t_{stg(1)}$	$I_{CP} = 10\text{ A}, I_{B1}(\text{end}) = 1.4\text{ A}$ $f_H = 64\text{ kHz}$	—	2.6	3.0	μs
	Fall Time	$t_f(1)$		—	0.2	0.3	
	Storage Time	$t_{stg(2)}$	$I_{CP} = 8\text{ A}, I_{B1}(\text{end}) = 1.2\text{ A}$ $f_H = 130\text{ kHz}$	—	1.4	1.6	μs
	Fall Time	$t_f(2)$		—	0.10	0.15	

