

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5422HORIZONTAL DEFLECTION OUTPUT FOR MEDIUM RESOLUTION
DISPLAY, COLOR TV FOR MULTI-MEDIA & HDTV

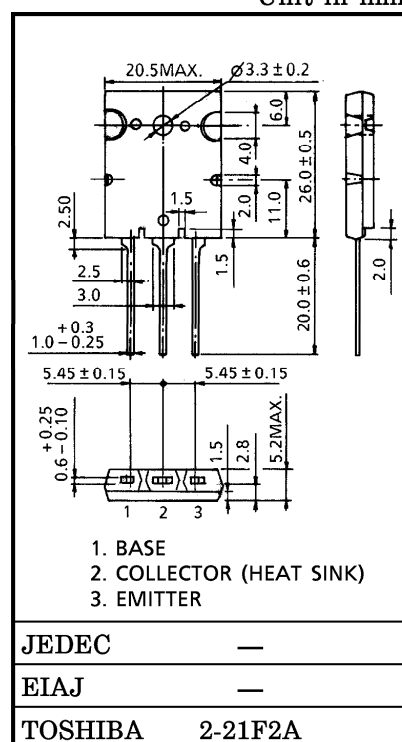
HIGH SPEED SWITCHING APPLICATIONS

Unit in mm

- High Voltage : $V_{CBO} = 1700\text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 3\text{ V (Max.)}$
- High Speed : $t_f = 0.15\text{ }\mu\text{s (Typ.)}$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1700	V
Collector-Emitter Voltage	V_{CEO}	600	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	15
	Pulse	I_{CP}	30
Base Current	I_B	7.5	A
Collector Power Dissipation ($T_c = 25^\circ\text{C}$)	P_C	200	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55\sim 150$	$^\circ\text{C}$



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
Emitter-Base Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	600	—	—	V
DC Current Gain	$h_{FE(1)}$		$V_{CE} = 5\text{ V}, I_C = 2\text{ A}$	10	—	40	
	$h_{FE(2)}$		$V_{CE} = 5\text{ V}, I_C = 11\text{ A}$	4.5	—	8.5	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 11\text{ A}, I_B = 2.75\text{ A}$	—	—	3	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 11\text{ A}, I_B = 2.75\text{ A}$	—	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}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	220	—	pF
Switching Time	Storage Time	t_{stg}	$I_{CP} = 8\text{ A}, I_{B1}(\text{end}) = 1.4\text{ A}$ $f_H = 64\text{ kHz}$	—	2.5	3.5	μs
	Fall Time	t_f		—	0.15	0.3	

