

TOSHIBA TRANSISTOR SILICON EPITAXIAL PLANAR TYPE

2SC4203

VIDEO OUTPUT FOR HIGH DEFINITION VDT

HIGH SPEED SWITCHING APPLICATIONS

- High Transition Frequency : $f_T = 400 \text{ MHz}$ (Typ.)
($V_{CE} = 10 \text{ V}$, $I_C = 70 \text{ mA}$)
- Low Output Capacitance : $C_{ob} = 5 \text{ pF}$ (Max.) ($V_{CB} = 30 \text{ V}$)
- High Voltage : $V_{CEO} = 150 \text{ V}$
- High Power Dissipation : $P_C = 10 \text{ W}$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	180	V
Collector-Emitter Voltage	V_{CEO}	150	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	0.3
	Pulse	I_{CP}	0.5
Base Current (DC)	I_B	0.2	A
Power Dissipation	$T_c = 25^\circ\text{C}$	P_C	10
	$T_a = 25^\circ\text{C}$		1.0
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CB0}	$V_{CB} = 150 \text{ V}$, $I_E = 0$	—	—	10	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5 \text{ V}$, $I_C = 0$	—	—	10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}$, $I_B = 0$	150	—	—	V
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 10 \text{ V}$, $I_C = 50 \text{ mA}$	40	—	240	
	$h_{FE}(2)$	$V_{CE} = 10 \text{ V}$, $I_C = 200 \text{ mA}$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 200 \text{ mA}$, $I_B = 20 \text{ mA}$	—	—	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 200 \text{ mA}$, $I_B = 20 \text{ mA}$	—	—	1.5	V
Transition Frequency	f_T	$V_{CE} = 10 \text{ V}$, $I_C = 70 \text{ mA}$	300	400	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 30 \text{ V}$, $f = 1 \text{ MHz}$, $I_E = 0$	—	4.0	5.0	pF

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Unit in mm





