

HIGH CURRENT SWITCHING APPLICATIONS.

INDUSTRIAL APPLICATIONS

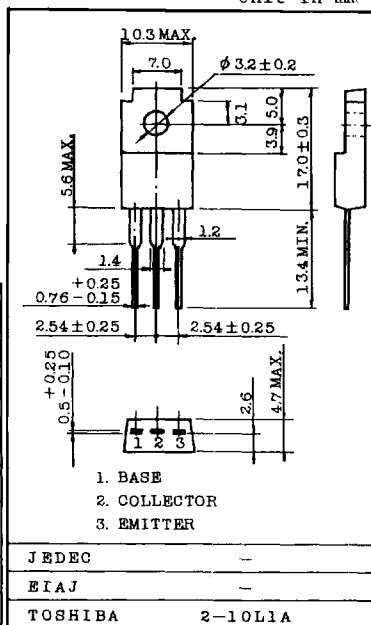
Unit in mm

FEATURES:

- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V(\text{Max.})$ (at $I_C = -6A$)
- High Speed Switching Time : $t_{stg} = 1.0\mu s(\text{Typ.})$
- Complementary to 2SC3709

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-12	A
Base Current	I_B	-2	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	30	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



Weight: 2.1g

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -60V, I_E = 0$	-	-	-10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -6V, I_C = 0$	-	-	-10	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -50mA, I_B = 0$	-50	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE} = -1V, I_C = -1A$	70	-	240	
		$h_{FE(2)}$	$V_{CE} = -1V, I_C = -6A$	40	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C = -6A, I_B = -0.3A$	-	-0.15	-0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C = -6A, I_B = -0.3A$	-	-0.9	-1.2	
Transition Frequency		f_T	$V_{CE} = -5V, I_C = -1A$	-	70	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	320	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.3	-	μs
	Storage Time	t_{stg}		-	1.0	-	
	Fall Time	t_f		-	0.5	-	

Note : $h_{FE(1)}$ Classification 0 : 70~140, Y : 120~240

