

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (DARLINGTON)

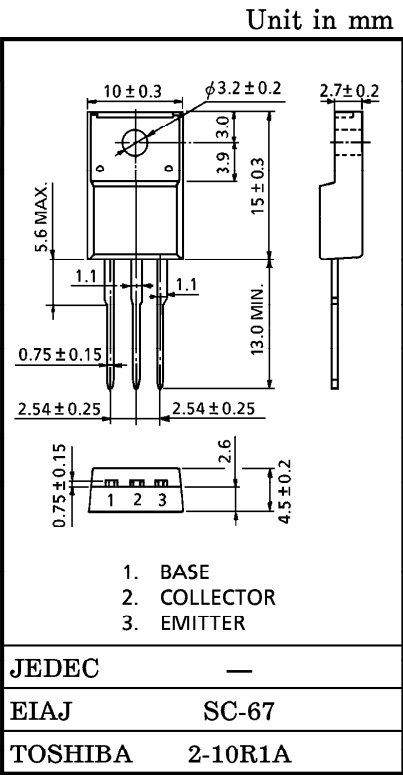
2SD2129

HIGH POWER SWITCHING APPLICATIONS
HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS

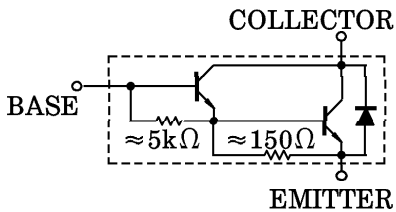
- High DC Current Gain
: $h_{FE}=2000$ (Min.)
- Low Saturation Voltage : $V_{CE(sat)}=1.5V$ (Max.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		VCBO	100	V
Collector-Emitter Voltage		VCEO	100	V
Emitter-Base Voltage		VEBO	7	V
Collector Current	DC	IC	3	A
	Pulse	ICP	5	
Base Current		IB	0.5	A
Collector Power Dissipation	Ta = 25°C	PC	2.0	W
	Tc = 25°C		20	
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-55~150	°C



EQUIVALENT CIRCUIT

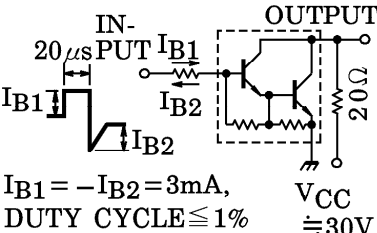


Weight : 1.7g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 100V, I _E = 0	—	—	100	μA
Emitter Cut-off Current		IEBO	V _{EB} = 6V, I _C = 0	—	—	2.5	mA
Collector-Emitter Breakdown Voltage		V _(BR) CEO	I _C = 30mA, I _B = 0	100	—	—	V
DC Current Gain	h _{FE} (1)		V _{CE} = 3V, I _C = 1.5A	2000	—	15000	
	h _{FE} (2)		V _{CE} = 3V, I _C = 3A	1000	—	—	
Collector-Emitter Saturation Voltage	V _{CE} (sat) (1)		I _C = 1.5A, I _B = 3mA	—	—	1.5	V
	V _{CE} (sat) (2)		I _C = 3A, I _B = 12mA	—	—	2.0	
Base-Emitter Saturation Voltage		V _{BE} (sat)	I _C = 1.5A, I _B = 3mA	—	—	2.0	V
Switching Time	Turn-on Time	t _{on}	 I _{B1} = -I _{B2} = 3mA, DUTY CYCLE ≤ 1%	—	1.0	—	μs
	Storage Time	t _{stg}		—	5.0	—	
	Fall Time	t _f		—	2.0	—	

