

SILICON NPN TRIPLE DIFFUSED TYPE

2N3055

GENERAL PURPOSE POWER TRANSISTOR.

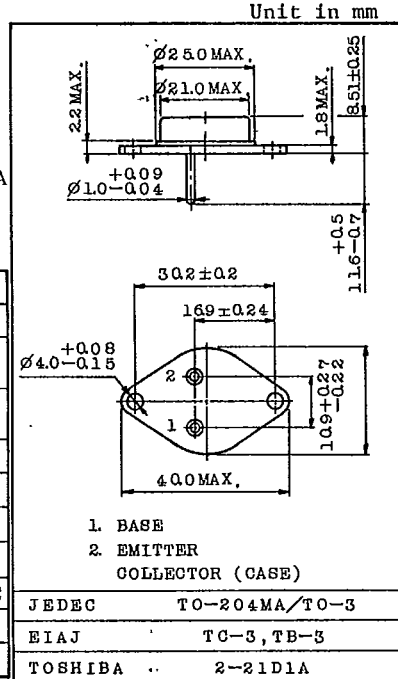
POWER REGULATOR, SWITCHING AND SOLENOID
DRIVES APPLICATIONS.

FEATURES:

- . High Gain at High Current
- . Low Saturation Voltage : $V_{CE(sat)} < 1.1V$, @ $I_C=4A, I_B=0.4A$
- . Excellent Area of Safe Operatings

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
* Collector-Base Voltage	V_{CB0}	100	V
* Collector-Emitter Sustaining Voltage ($R_{BP}=100\ \Omega$)	$V_{CER(SUS)}$	70	V
* Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	60	V
* Emitter-Base Voltage	V_{EB0}	7	V
* Collector Current	I_C	15	A
* Base Current	I_B	7	A
* Collector Power Dissipation ($T_c=25^\circ C$) Derate Linearly	P_C	115	W
		0.66	W / $^\circ C$
* Junction Temperature	T_j	200	$^\circ C$
* Storage Temperature Range	T_{stg}	-65 ~ 200	$^\circ C$



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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
* Collector Cut-off Current	I_{CEX}	$V_{CE}=100V, V_{BE}=-1.5V$	-	-	5	mA
* Collector Cut-off Current	I_{CEX}	$V_{CE}=100V, V_{BE}=-1.5V, T_c=150^\circ C$	-	-	30	mA
* Collector Cut-off Current	I_{CEO}	$V_{CE}=30V, I_B=0$	-	-	0.7	mA
* Emitter Cut-off Current	I_{EB0}	$V_{EB}=7V, I_C=0$	-	-	5	mA
* Collector-Emitter Sustaining Voltage	$V_{CER(SUS)}$ **	$I_C=0.2A, R_{BE}=100\ \Omega$	70	-	-	V
* Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$ **	$I_C=0.2A, I_B=0$	60	-	-	V
* DC Current Gain	h_{FE}	$V_{CE}=4V, I_C=4A$	20	-	70	
		$V_{CE}=4V, I_C=10A$	5	-	-	
* Base-Emitter Voltage	V_{BE}	$V_{CE}=4V, I_C=4A$	-	-	1.8	V
* Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A, I_B=0.4A$	-	-	1.1	V
		$I_C=10A, I_B=3.3A$	-	-	8	V
* Small Signal Current Gain Cut-off Frequency	f_{hfe}	$V_{CE}=4V, I_C=1A, f=10kHz$	20	-	-	kHz
* Small Signal Current Gain	$ h_{fe} $	$V_{CE}=4V, I_C=1A, f=1MHz$	2.5	-	-	
* Second Breakdown Collector Current (Base Forward Bias)	I_s/h	$V_{CE}=40V, t=1s$ (non repetitive)	2.87	-	-	A

* In Accordance With JEDEC Registration Data.

** The sustaining voltages $V_{CER(SUS)}$ and $V_{CEO(SUS)}$ MUST NOT be measured on a curve tracer.

TOSHIBA CORPORATION

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