

SILICON NPN TRIPLE DIFFUSED TYPE

2SD641

HIGH VOLTAGE SWITCHING APPLICATIONS.

HIGH POWER AMPLIFIER APPLICATIONS.

FEATURES:

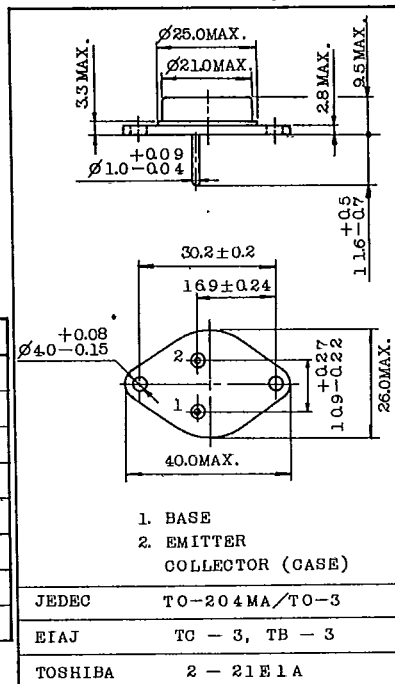
- High Voltage : $V_{CE0}=400V$
- Low Saturation Voltage : $V_{CE(sat)}=1.5V$ (Max.)
($I_C=10A, I_B=2A$)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	600	V
Collector-Emitter Voltage	V_{CE0}	400	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	15	A
Base Current	I_B	5	A
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	150	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-65~150	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm



1. BASE
2. EMITTER
COLLECTOR (CASE)

JEDEC TO-204 MA/T0-3

EIAJ TC-3, TB-3

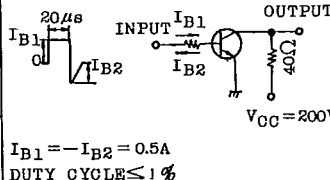
TOSHIBA 2-21E1A

Mounting Kit No. AC73

Weight : 15.8g

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

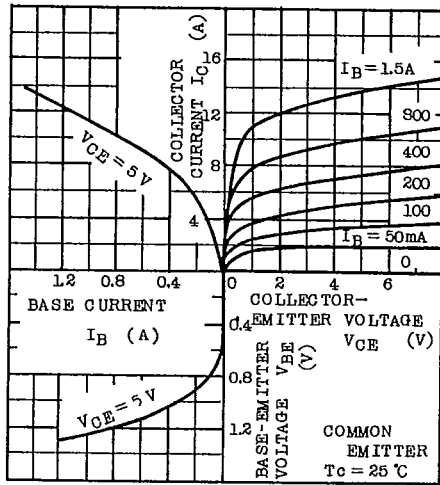
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=500V, I_E=0$	-	-	0.5	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	1	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C=20mA, I_B=0$	400	-	-	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=5A$	20	-	140	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10A, I_B=2A$	-	-	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10A, I_B=2A$	-	-	2.0	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=0.5A$	-	4	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=50V, I_E=0, f=1MHz$	-	150	-	pF
Switching Time	Turn-on Time	t_{on}	-	0.8	-	μs
	Storage Time	t_{stg}	-	3.5	-	
	Fall Time	t_f	-	0.6	-	



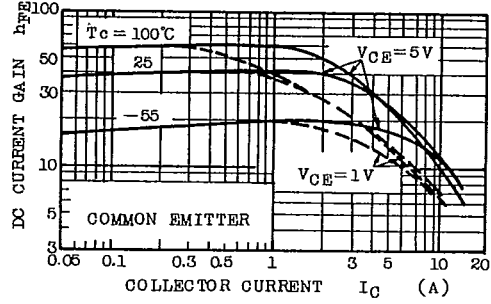
..... TOSHIBA CORPORATION

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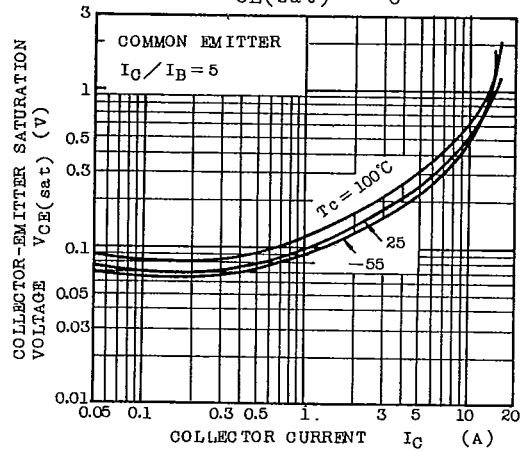
STATIC CHARACTERISTICS



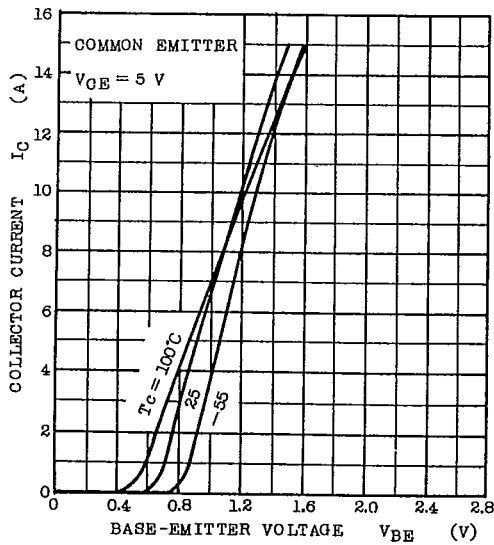
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$I_C - V_{BE}$



$V_{BE(sat)} - I_C$

