

2SD640

SILICON NPN TRIPLE DIFFUSED TYPE

HIGH VOLTAGE SWITCHING APPLICATIONS.
HIGH POWER AMPLIFIER APPLICATIONS.

FEATURES:

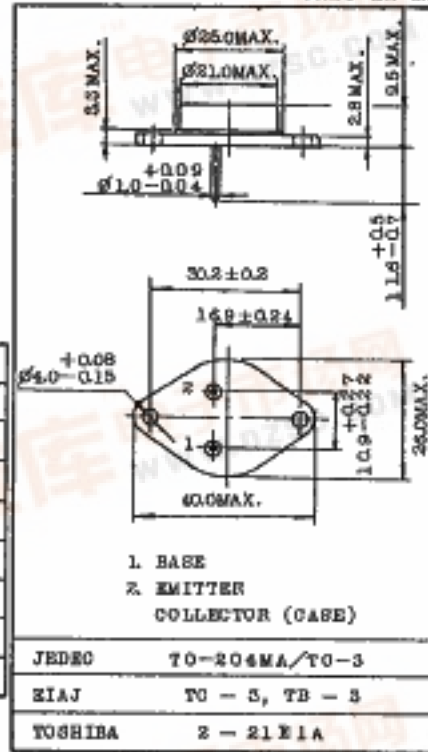
- High Voltage : $V_{CEO}=400V$
- Low Saturation Voltage : $V_{CE(sat)}=1.5V$ (Max.)
($I_C=5A, I_B=1A$)

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	7	A
Base Current	I_B	2	A
Collector Power Dissipation (Tc=25°C)	P_C	100	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65~150	°C

INDUSTRIAL APPLICATIONS

Unit in mm



Mounting Kit No.AC73
Weight : 15.8g

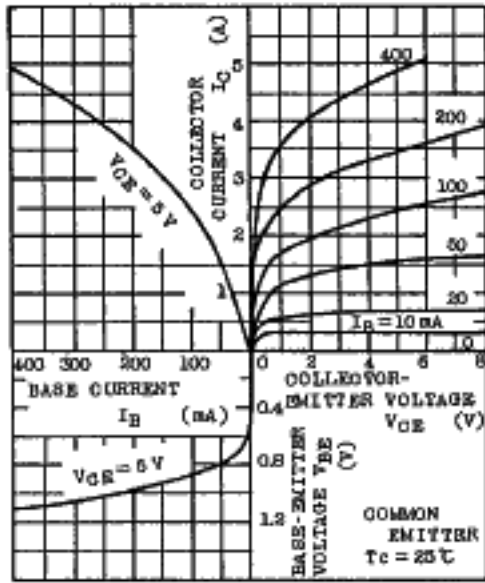
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=500V, I_E=0$	-	-	100	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	1	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	400	-	-	V
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1A$	25	-	140	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5A, I_B=1A$	-	-	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=1A$	-	-	2.0	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=0.5A$	-	3	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=50V, I_E=0, f=1MHz$	-	70	-	pF
Switching Time	Turn-on Time		-	1.0	-	μs
	Storage Time		-	3.0	-	
	Fall Time		-	0.6	-	

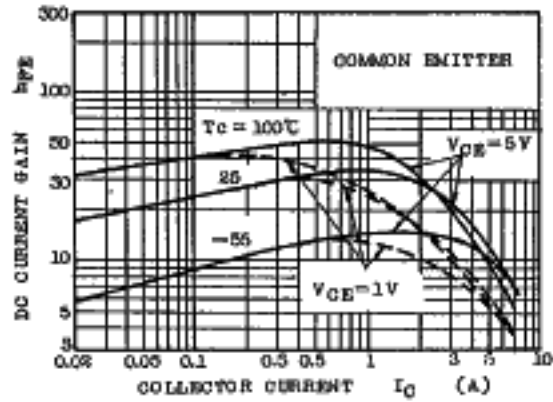
TOSHIBA CORPORATION



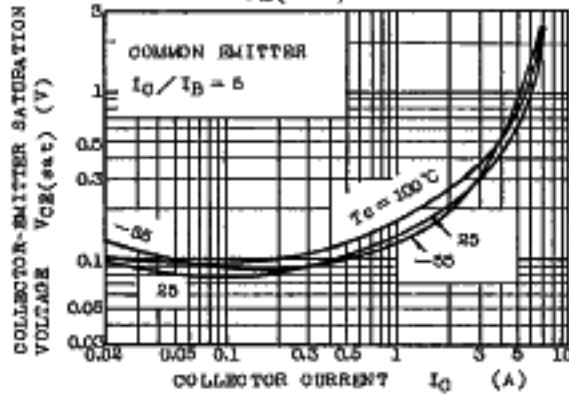
STATIC CHARACTERISTICS



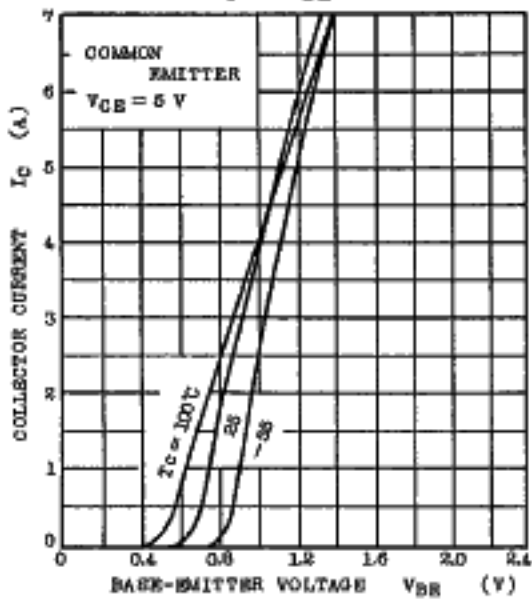
$h_{FE} - I_C$



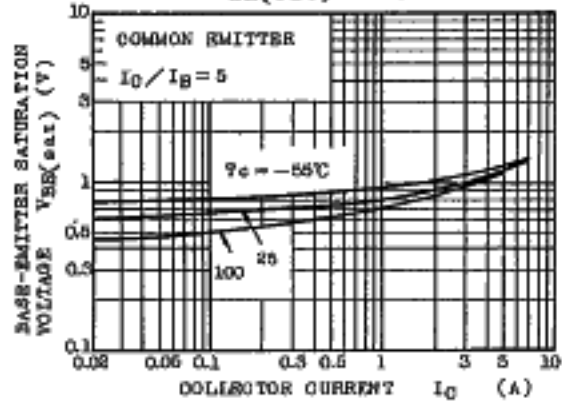
$V_{CE(sat)} - I_C$



$I_C - V_{BE}$



$V_{BE(sat)} - I_C$



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