

VOLTAGE REGULATORS, RELAY DRIVERS  
LAMP DRIVERS, ELECTRICAL EQUIPMENT

### FEATURES

- Adoption of MBIT processes.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Large current capacity and wide ASO.
- Complementary to KTD1624.

### MAXIMUM RATING (Ta=25°C)

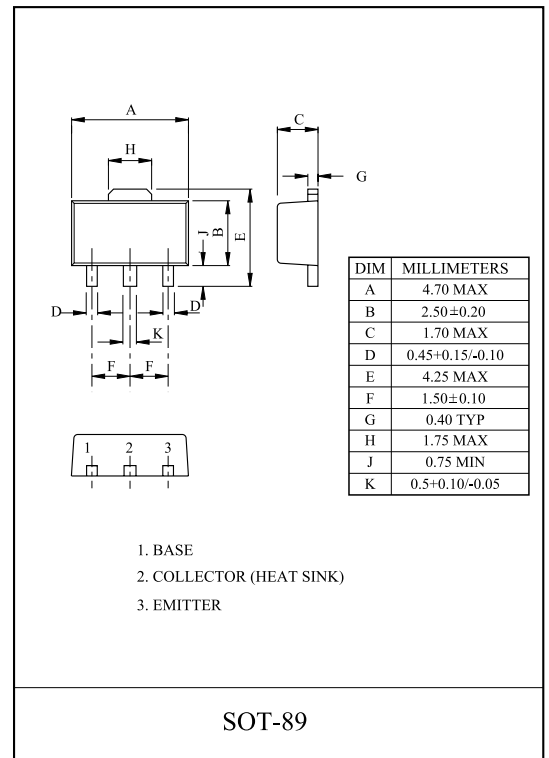
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Current	$I_C$	-3	A
Collector Current(Pulse)	$I_{CP}$	-6	A
Base Current	$I_B$	-600	mA
Collector Power Dissipation	$P_C$	500	mW
	$P_C^*$	1	W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

\* : Package mounted on ceramic substrate(250mm<sup>2</sup> × 0.8t)

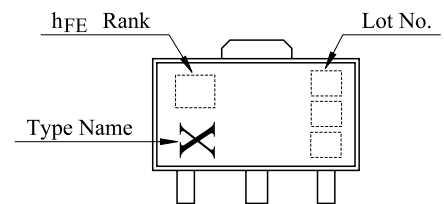
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-40V, I_E=0$	-	-	-1	μA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$	-	-	-1	μA
DC Current Gain	$h_{FE}(1)$ (Note)	$V_{CE}=-2V, I_C=-100mA$	100	-	400	
	$h_{FE}(2)$	$V_{CE}=-2V, I_C=-3A$	35	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-2A, I_B=-100mA$	-	-0.35	-0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-2A, I_B=-100mA$	-	-0.94	-1.2	V
Transition Frequency	$f_T$	$V_{CE}=-10V, I_C=-50mA$	-	150	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-10V, f=1MHz$	-	39	-	pF
Switching Time	Turn-on Time	$t_{on}$	-	70	-	nS
	Storage Time	$t_{stg}$	-	450	-	
	Fall Time	$t_f$	-	35	-	

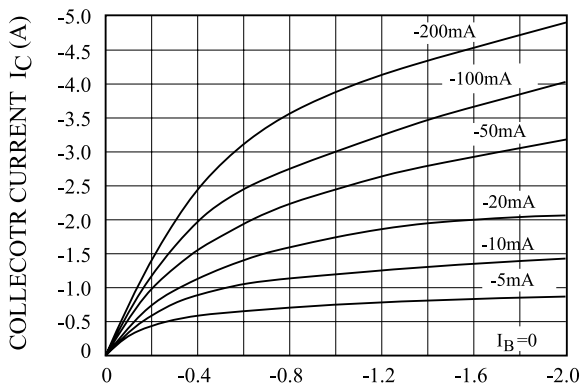
Note :  $h_{FE}(1)$  Classification A:100 ~ 200, B:140 ~ 280, C:200 ~ 400



### Marking

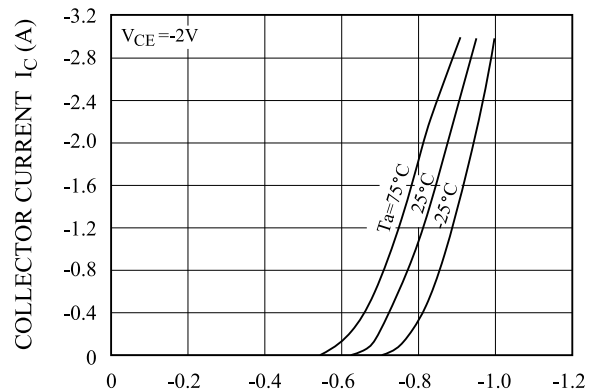


$I_C - V_{CE}$



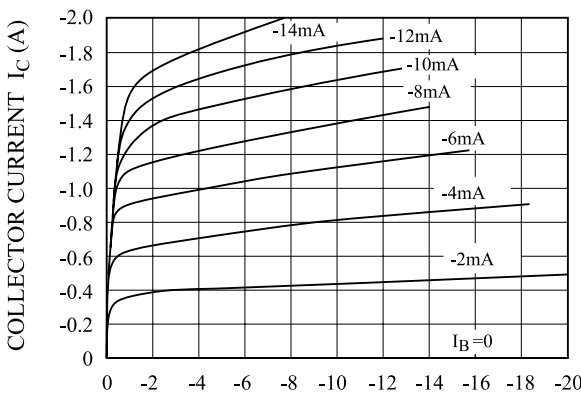
COLLECTOR-EMITTER VOLTAGE  $V_{CE}$  (V)

$I_C - V_{BE}$



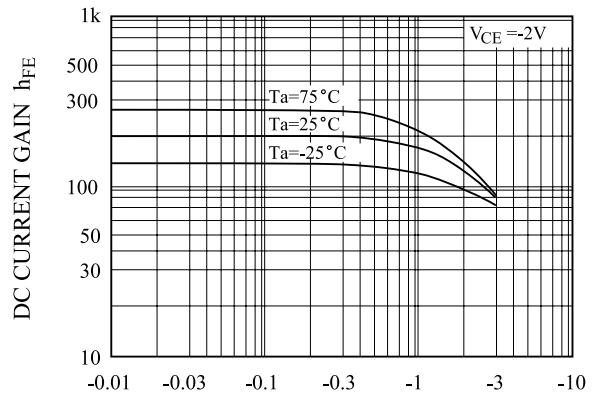
BASE EMITTER VOLTAGE  $V_{BE}$  (V)

$I_C - V_{CE}$



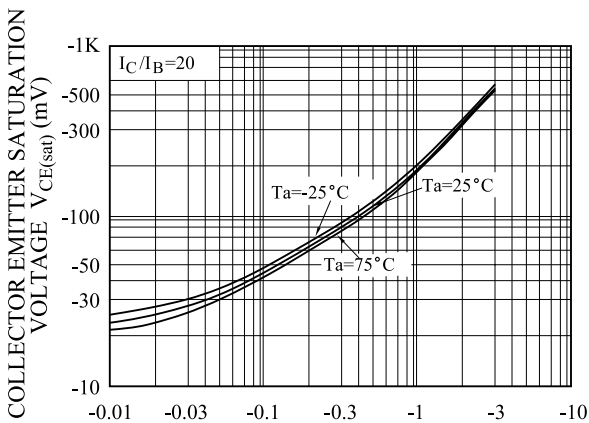
COLLECTOR EMITTER VOLTAGE  $V_{CE}$  (V)

$h_{FE} - I_C$



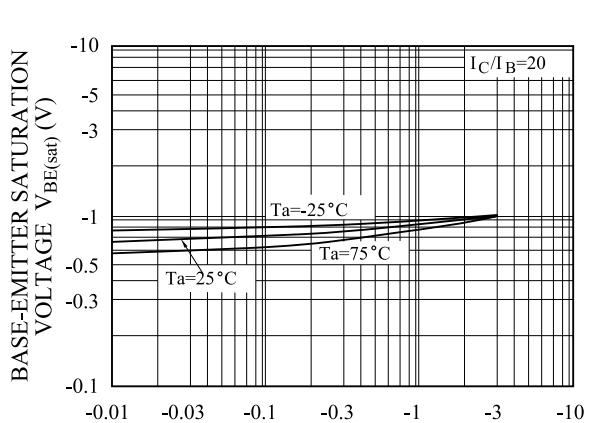
COLLECTOR CURRENT  $I_C$  (A)

$V_{CE(sat)} - I_C$



COLLECTOR CURRENT  $I_C$  (A)

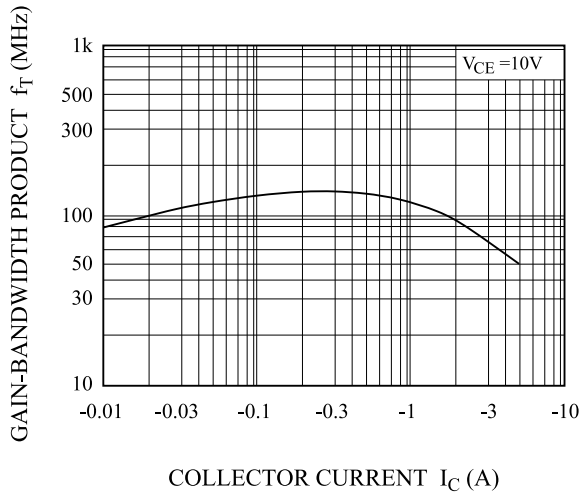
$V_{BE(sat)} - I_C$



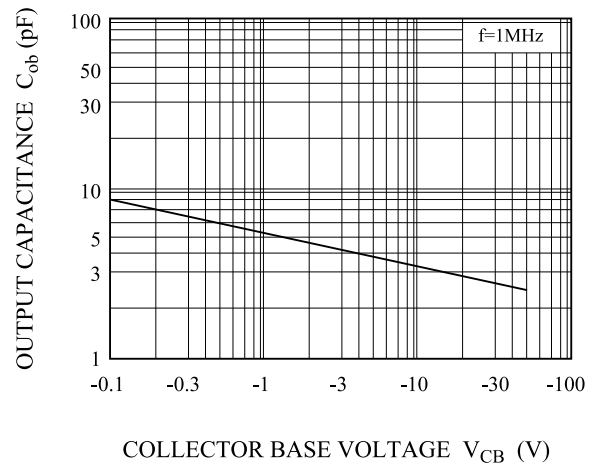
COLLECTOR CURRENT  $I_C$  (A)

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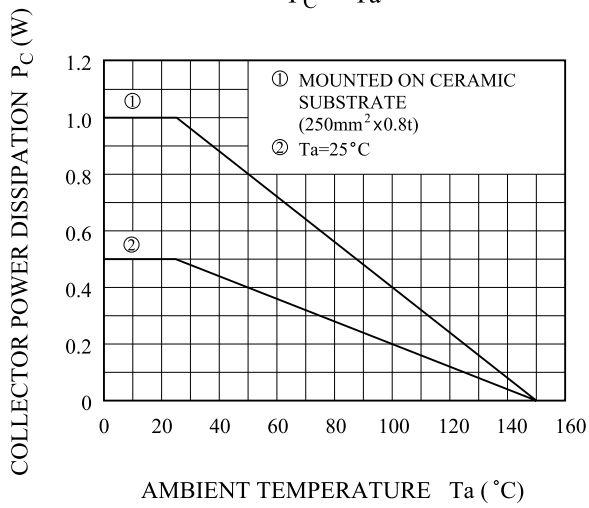
$f_T - I_C$



$C_{ob} - V_{CB}$



$P_C - T_a$



SAFE OPERATING AREA

