

VOLTAGE REGULATOR, RELAY,  
LAMP DRIVER, INDUSTRIAL USE

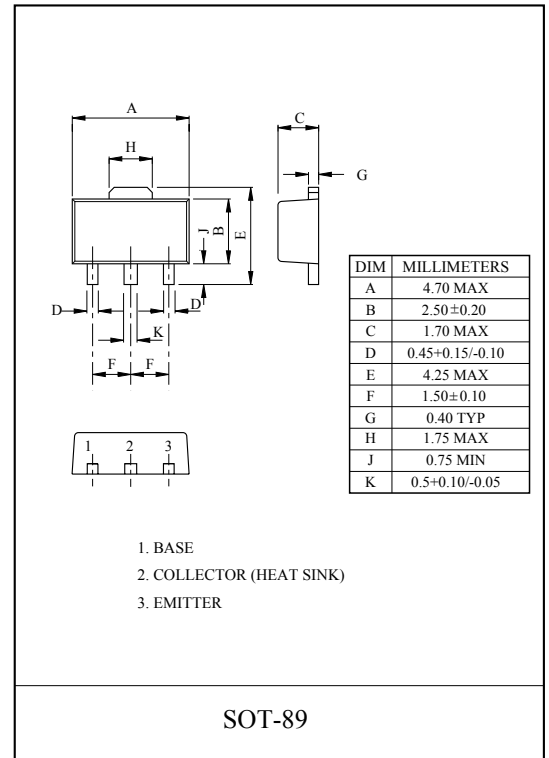
### FEATURES

- High Voltage :  $V_{CEO} = -60V(\text{Min.})$ .
- High Current :  $I_C(\text{Max.}) = -1A$ .
- High Transition Frequency :  $f_T = 150\text{MHz}(\text{Typ.})$ .
- Wide Area of Safe Operation.
- Complementary to KTC4378.

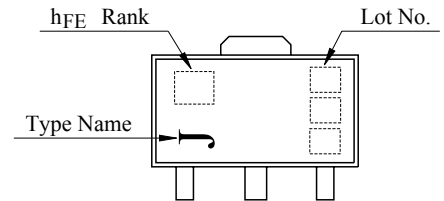
### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	-80	V
Collector-Emitter Voltage		$V_{CEO}$	-60	V
Emitter-Base Voltage		$V_{EBO}$	-5	V
Collector Current	DC	$I_C$	-1	A
	Pulse	$I_{CP}$	-2	
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

$P_C^*$  : Package mounted on ceramic substrate (250mm<sup>2</sup>x0.8t)



### Marking



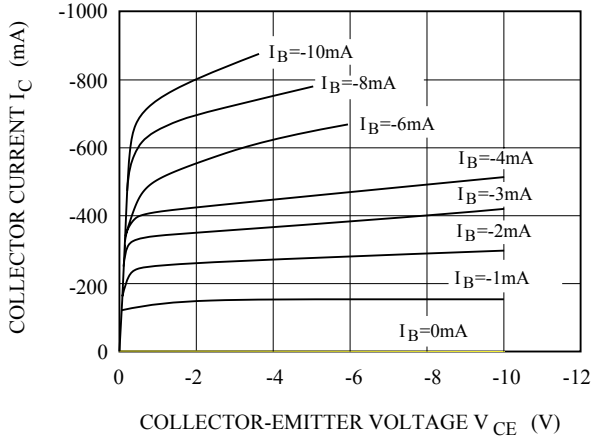
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$	-	-	-100	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -4V, I_C = 0$	-	-	-100	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -2V, I_C = -50mA$	60	-	200	
	$h_{FE(2)}$	$V_{CE} = -2V, I_C = -1A$	30	-	-	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-60	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$	-	-0.2	-0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$	-	-0.85	-1.2	V
Transition Frequency	$f_T$	$V_{CE} = -10V, I_C = -50mA$	-	150	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V, f = 1MHz$	-	12	-	pF

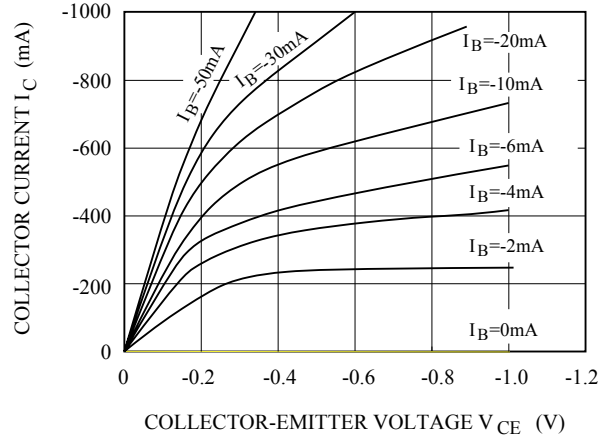
Note :  $h_{FE(1)}$  Classification O:60 ~ 120, Y:100 ~ 200

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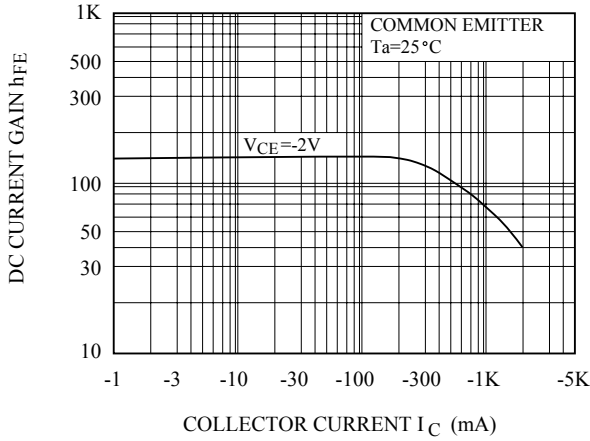
$I_C - V_{CE}$



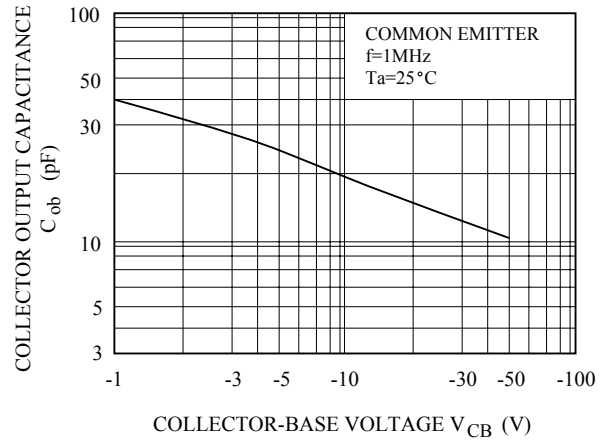
$I_C - V_{CE}$



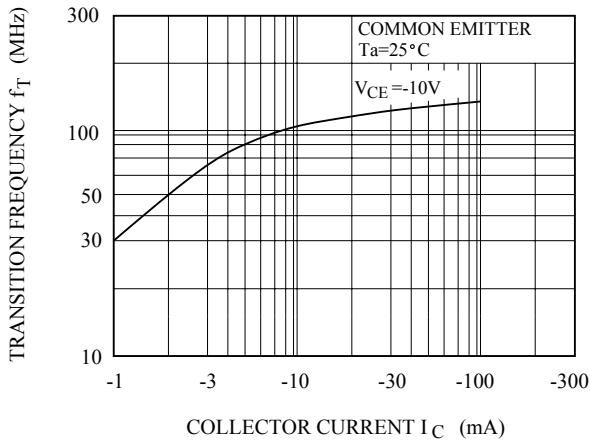
$h_{FE} - I_C$



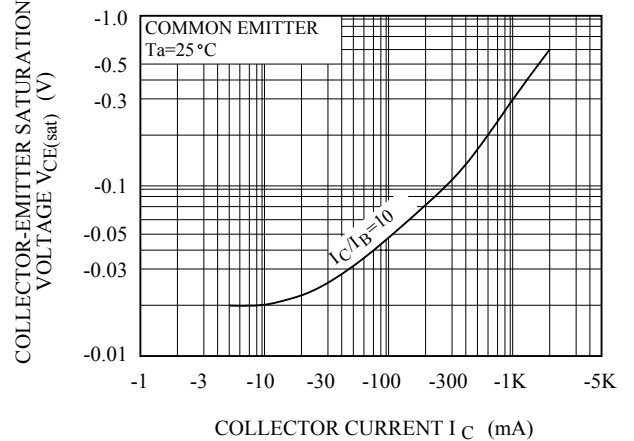
$C_{ob} - V_{CB}$



$f_T - I_C$

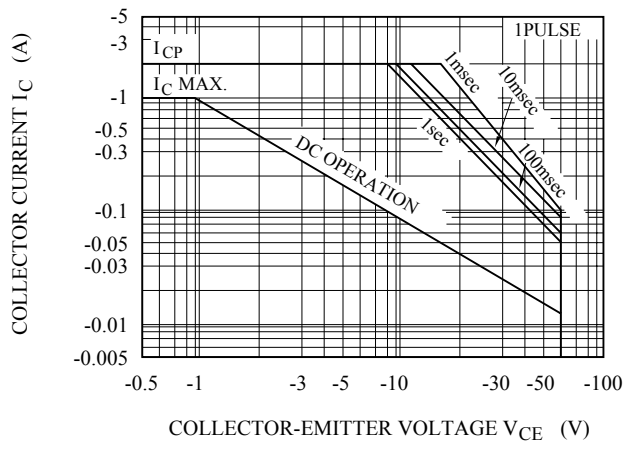


$V_{CE(sat)} - I_C$



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SAFE OPERATING AREA



$P_C - T_a$

