

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.
- Suffix U : Qualified to AEC-Q101.
ex) KTB1124-B-RTF/HU

MAXIMUM RATING (Ta=25°C)

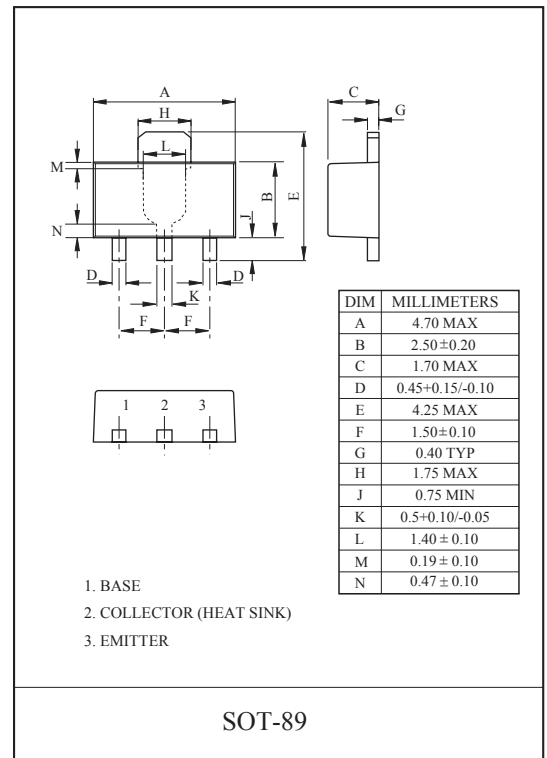
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-3	A
Collector Current(Pulse)	I_{CP}	-6	A
Base Current	I_B	-600	mA
Collector Power Dissipation	P_C	500	mW
	P_C^*	1	W
Junction Temperature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

* : Package mounted on ceramic substrate(250mm² × 0.8t)

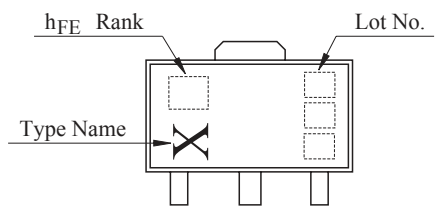
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

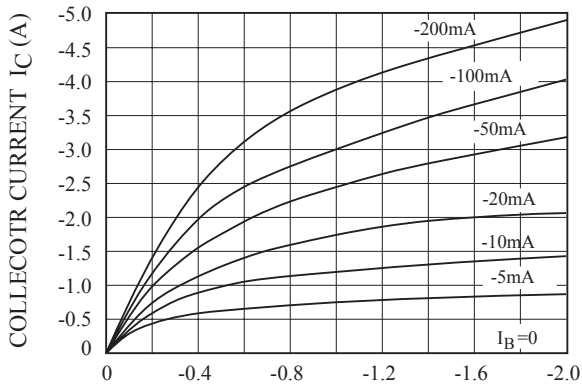


Marking



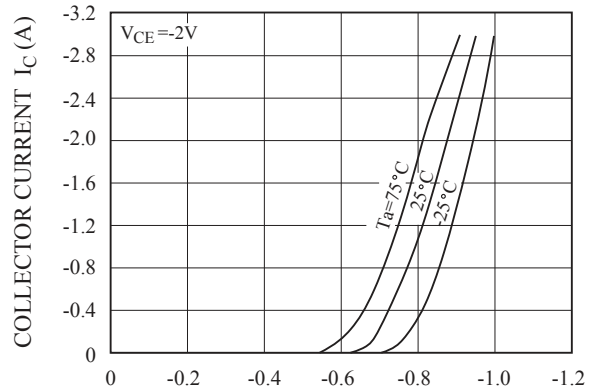
KTB1124

$I_C - V_{CE}$



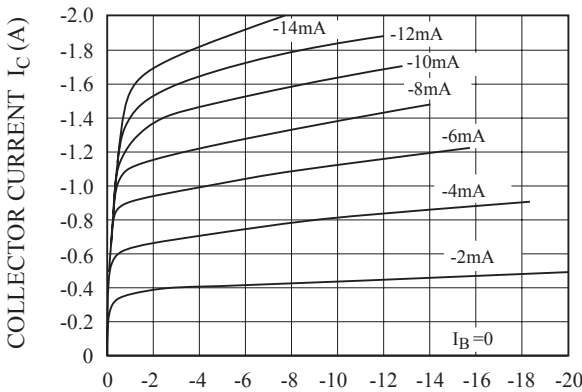
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

$I_C - V_{BE}$



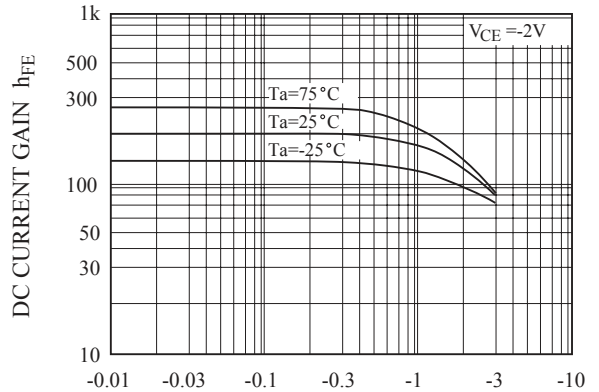
BASE-EMITTER VOLTAGE V_{BE} (V)

$I_C - V_{CE}$



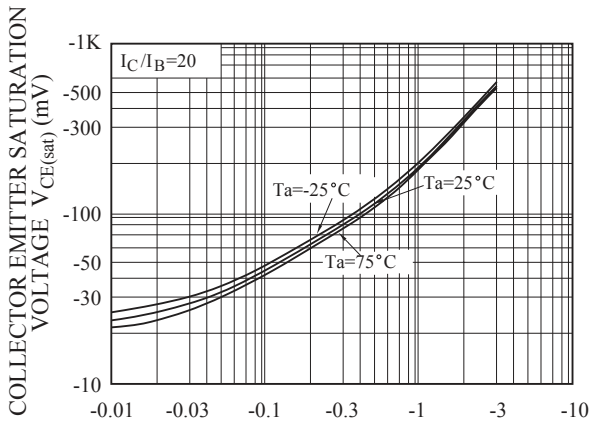
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

$h_{FE} - I_C$



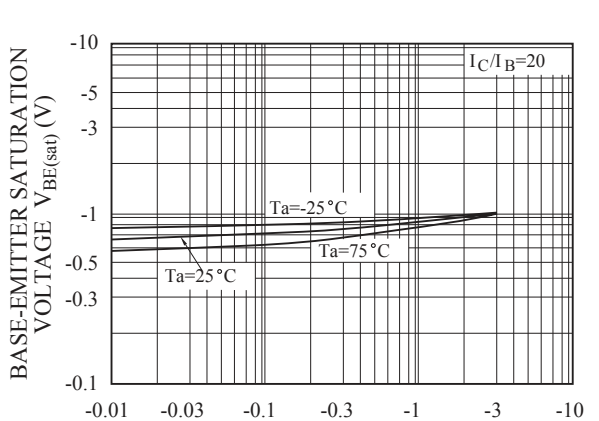
COLLECTOR CURRENT I_C (A)

$V_{CE(sat)} - I_C$



COLLECTOR CURRENT I_C (A)

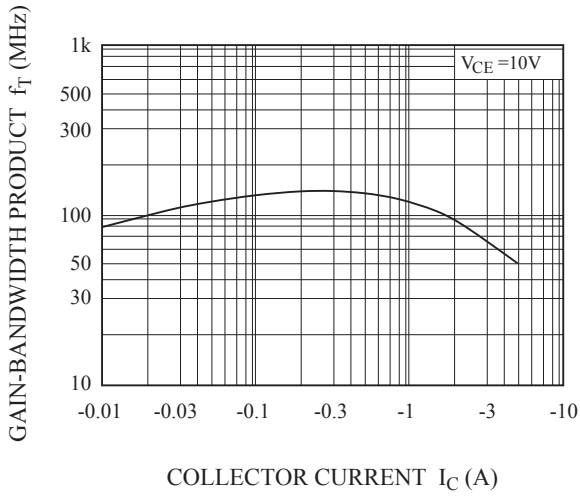
$V_{BE(sat)} - I_C$



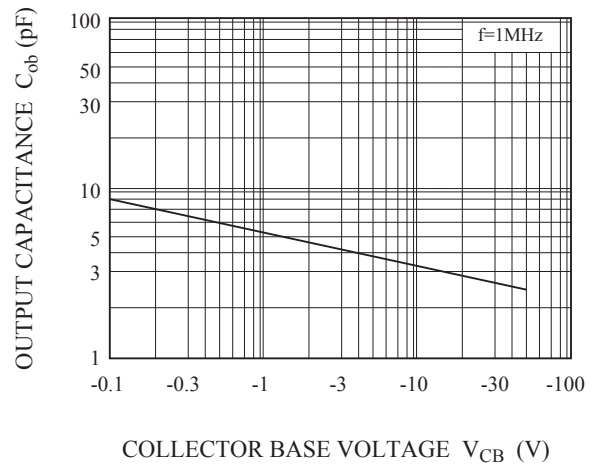
COLLECTOR CURRENT I_C (A)

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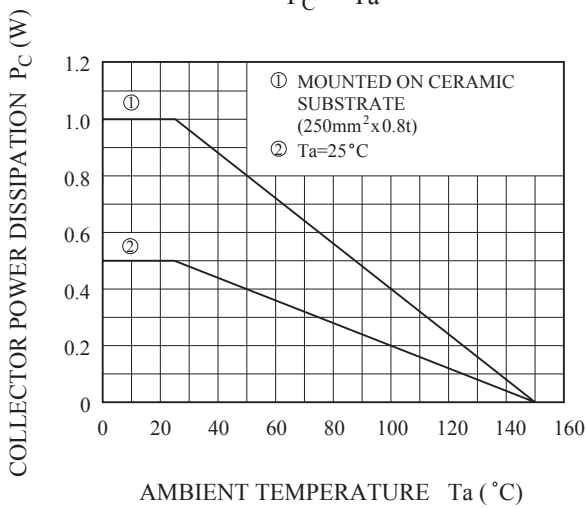
$f_T - I_C$



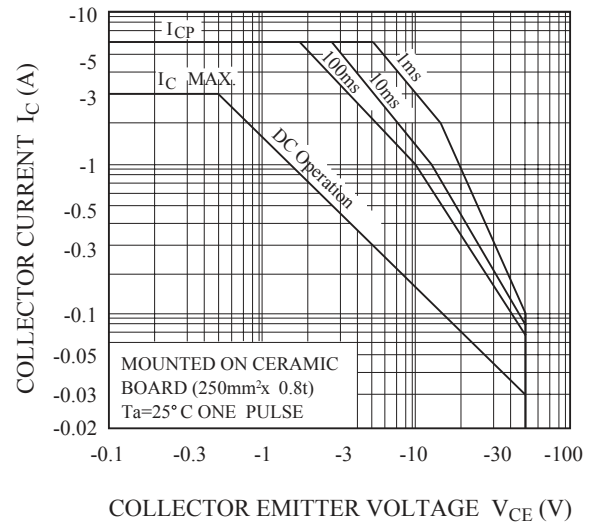
$C_{ob} - V_{CB}$



$P_C - T_a$



SAFE OPERATING AREA



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1. The products described in this data are intended to be used in general-purpose electronic equipment (Office equipment, telecommunication equipment, measuring equipment, home appliances)
2. When you intend to use these products with equipment or device which require an extremely high of reliability and special applications (such as automobile, air travel aerospace, transportation equipment, life support, system and safety devices) in which special quality and reliability and the failure or malfunction of products may directly jeopardize or harm the human body or damage to property and any application other than the standard application intended, please be sure to consult with our sales representative in advance.
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