

VOLTAGE REGULATOR, RELAY,
LAMP DRIVER, INDUSTRIAL USE

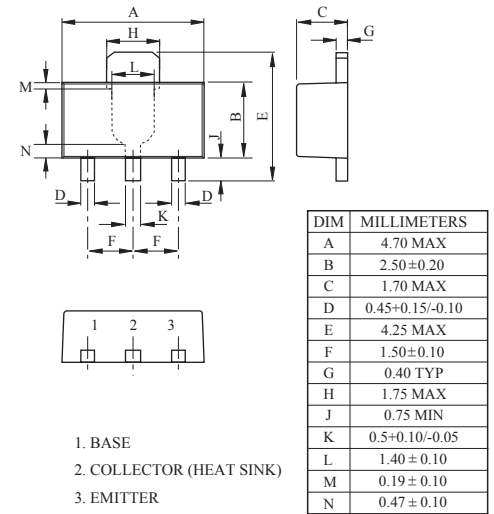
FEATURES

- 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 KTA1668.
 - Suffix U : Qualified to AEC-Q101.
- ex) KTC4378-Y-RTF/PU

MAXIMUM RATING (Ta=25°C)

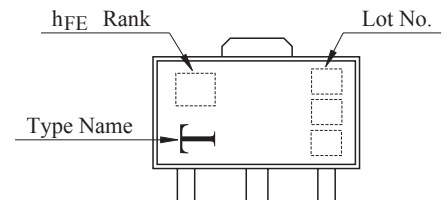
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	80	V
Collector-Emitter Voltage		V_{CEO}	60	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	1	A
	Pulse	I_{CP}	2	
Collector Power Dissipation		P_C	500	mW
		P_C^*	1	W
Thermal Resistance		$R_{th(j-c)}$	20	°C/W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C

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



SOT-89

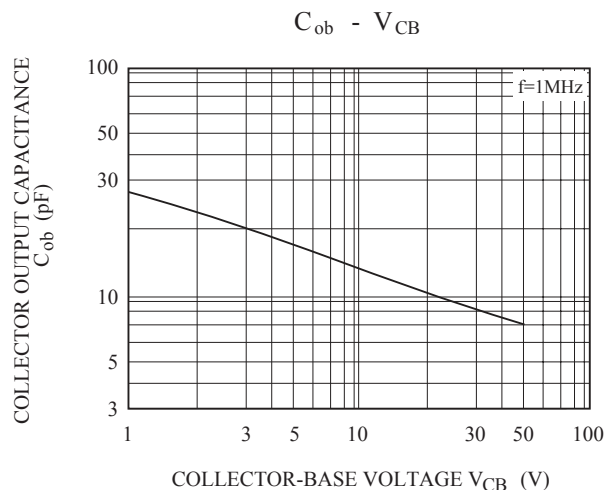
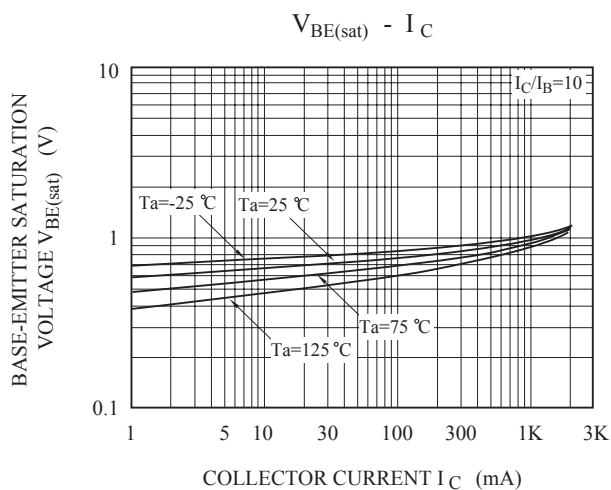
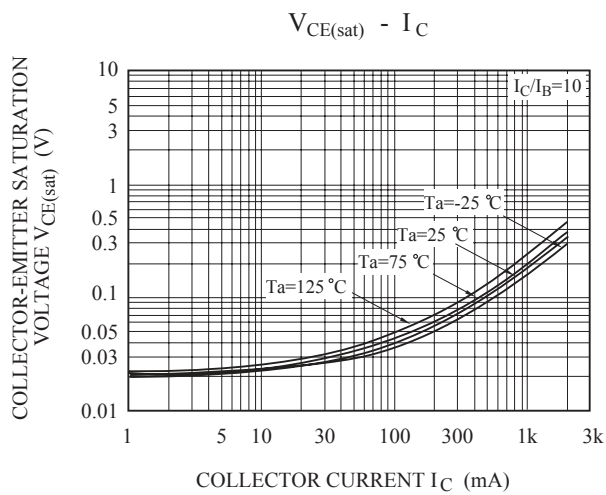
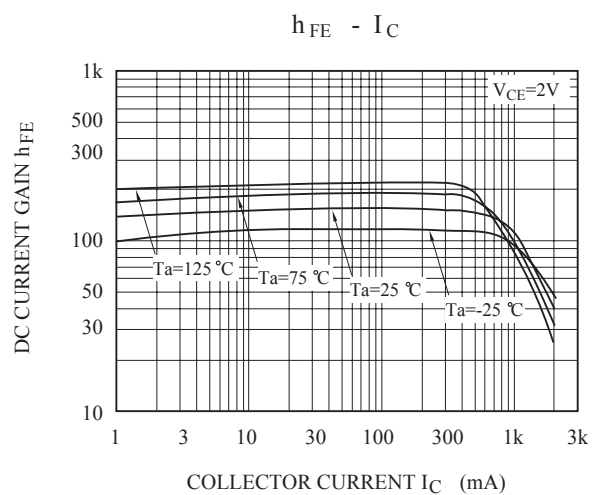
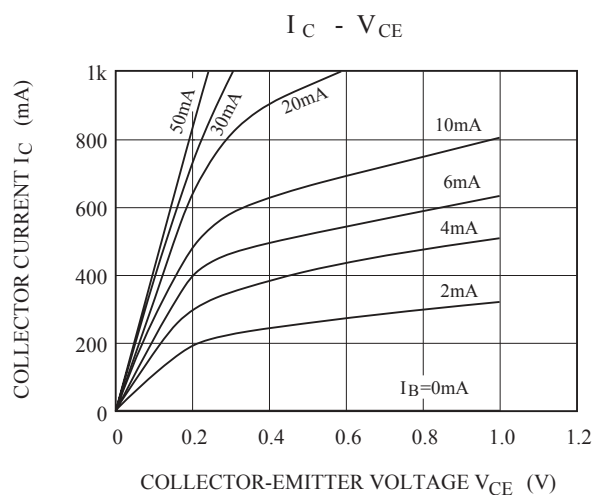
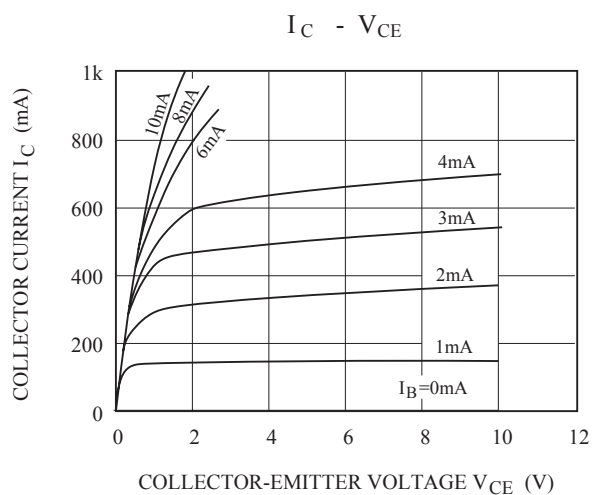
Marking



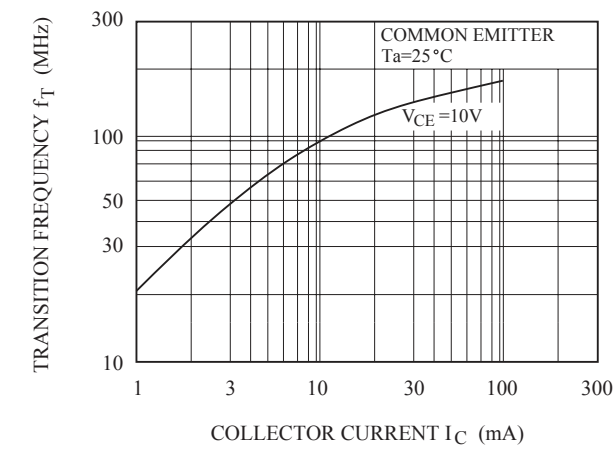
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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	$h_{FE}(1)$	$V_{CE}=2V, I_C=50mA$	120	-	320	
	$h_{FE}(2)$	$V_{CE}=2V, I_C=1A$	30	-	-	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	60	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$	-	0.15	0.5	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

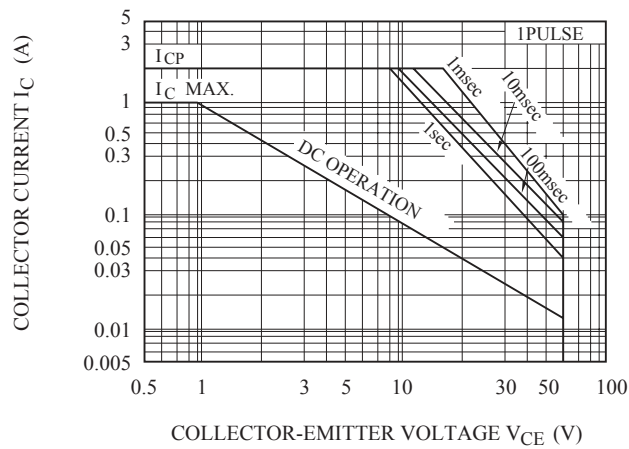
Note : $h_{FE}(1)$ Classification Y:120~200, GR:160~320



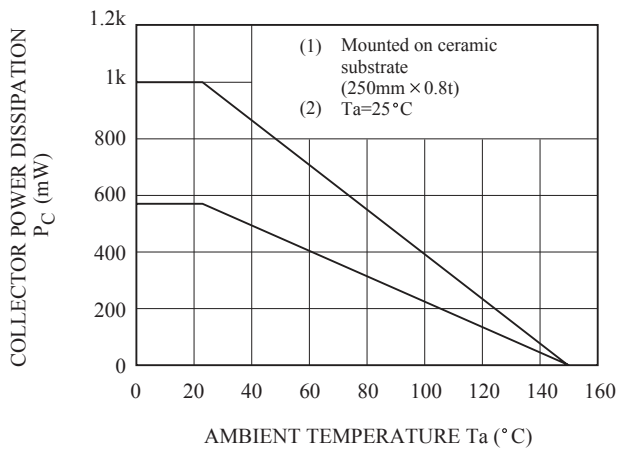
$f_T - I_C$



SAFE OPERATING AREA



$P_C - T_a$



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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.
3. On designing your application, please use product within the ranges guaranteed by KEC for maximum rating, operating supply voltage range, heat radiation characteristics and other characteristics. User shall be responsible for failure or damage when used beyond the guaranteed ranges.
4. The technical information described in this data is limited to showing representative characteristics and applied circuit examples of the products and it does not constitute the warranting of industrial property, the granting of relative rights, or the granting of any license.
5. What are described in the data may be changed without any prior notice to reflect new technical development. Please confirm that you have received the latest product standards or specification before final design, purchase or use.
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