

KEC

SEMICONDUCTOR
TECHNICAL DATA

KTA1541T

EPITAXIAL PLANAR PNP TRANSISTOR

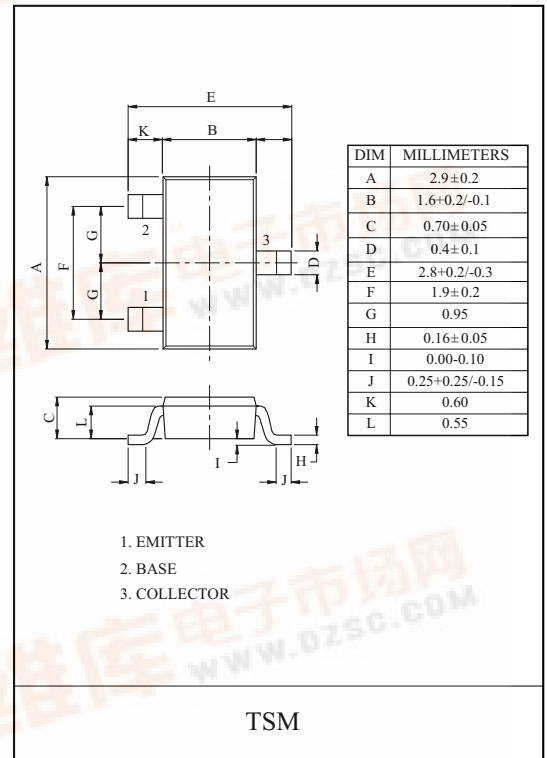
RELAY DRIVERS, LAMP DRIVERS,
MOTOR DRIVERS AND STROBES APPLICATION.

FEATURES

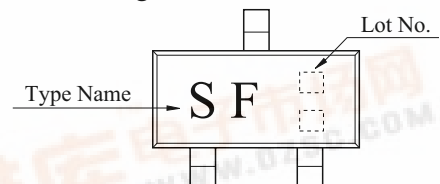
- Adoption of MBIT Processes.
- Large Current Capacitance.
- Low Collector-to-Emitter Saturation Voltage.
- High Speed Switching.
- Ultrasmall Package facilitates miniaturization in end products.
- High Allowable Power Dissipation.
- Complementary to KTC3541T.

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-30	V
Collector-Emitter Voltage		V_{CEO}	-30	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-1.5	A
	Pulse	I_{CP}	-3	
Base Current		I_B	-300	mA
Collector Power Dissipation		P_C^*	0.9	W
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

* Package mounted on a ceramic board (600mm²×0.8mm)

Marking

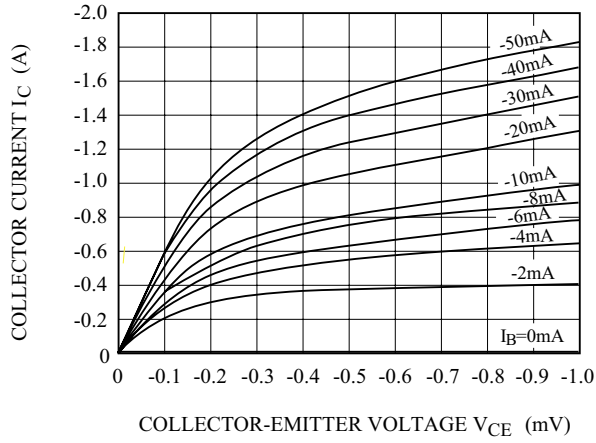


ELECTRICAL CHARACTERISTICS (Ta=25℃)

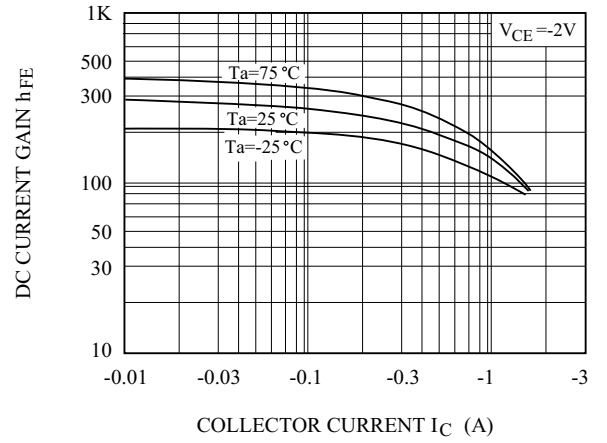
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=-30V, I_E=0$	-	-	-0.1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=-4V, I_C=0$	-	-	-0.1	μA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-30	-	-	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-30	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5	-	-	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=-750mA, I_B=-15mA$	-	-250	-375	mV
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=-750mA, I_B=-15mA$	-	-0.85	-1.2	V
DC Current Gain		h_{FE}	$V_{CE}=-2V, I_C=-100mA$	200	-	560	
Transition Frequency		f_T	$V_{CE}=-10V, I_C=-300mA$	-	380	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=-10V, f=1MHz$	-	25	-	pF
Switching Time	Turn-On Time	t_{on}		-	35	-	nS
	Storage Time	t_{stg}		-	115	-	
	Fall Time	t_f		-	30	-	

KTA1541T

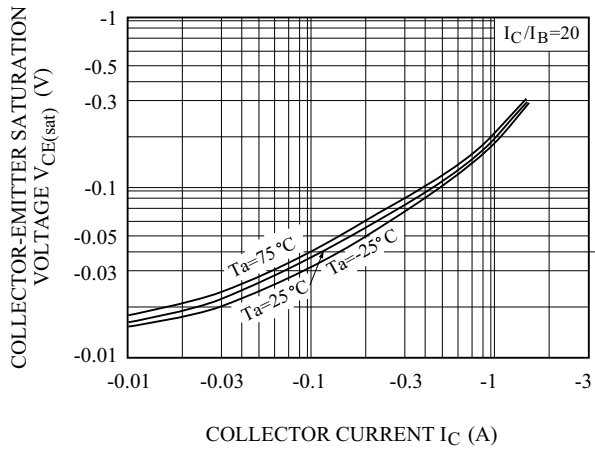
$I_C - V_{CE}$



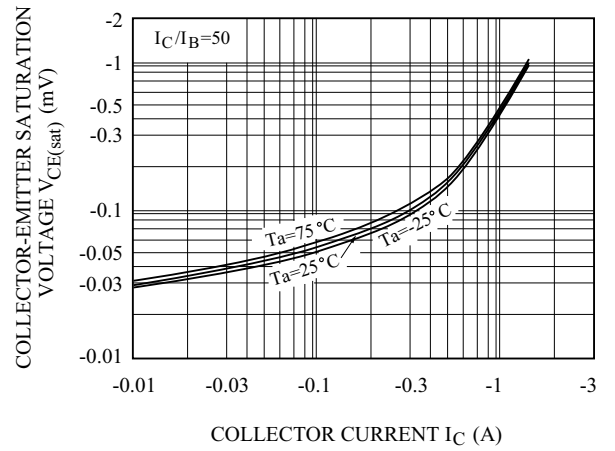
$h_{FE} - I_C$



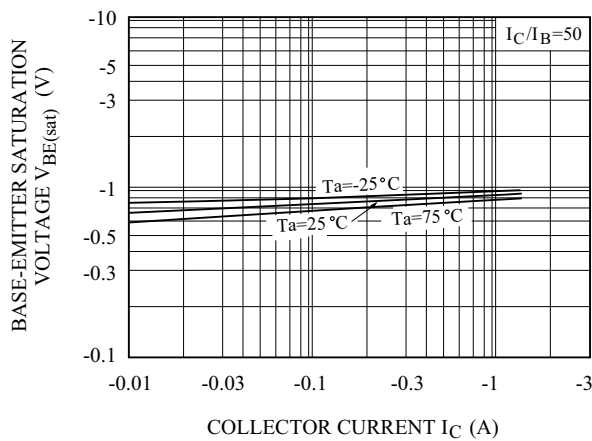
$V_{CE(sat)} - I_C$



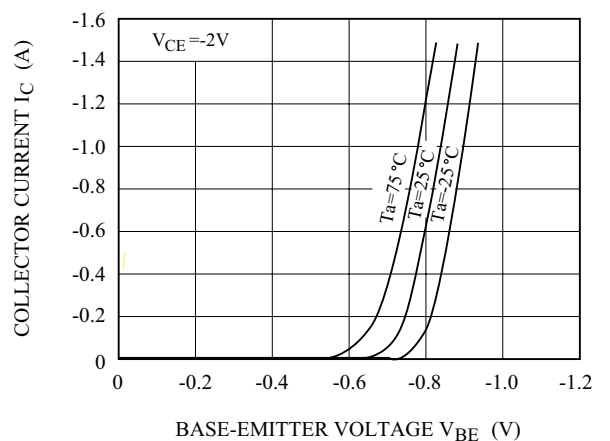
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$

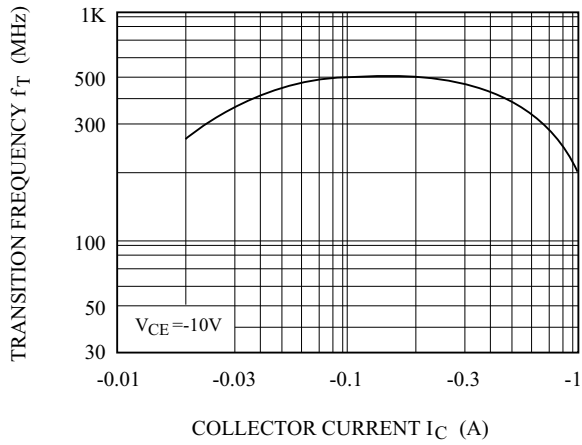


$I_C - V_{BE}$

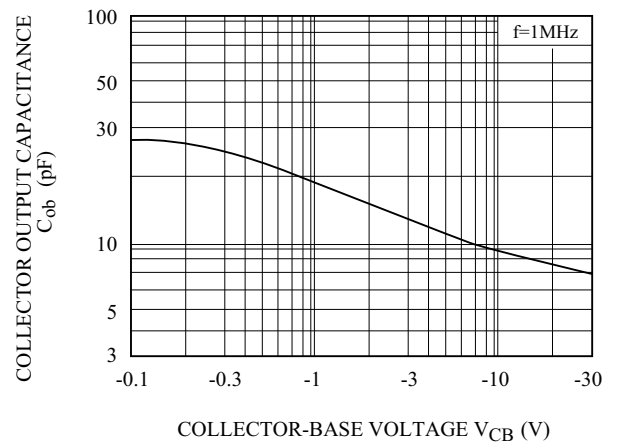


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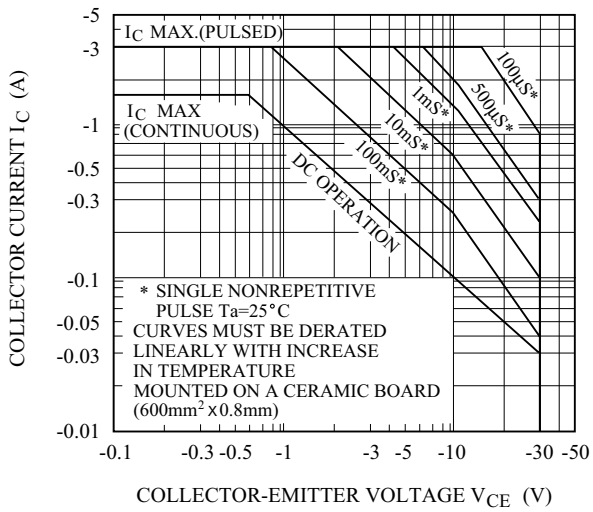
$f_T - I_C$



$C_{ob} - V_{CB}$



SAFE OPERATING AREA



$P_c - T_a$

