

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

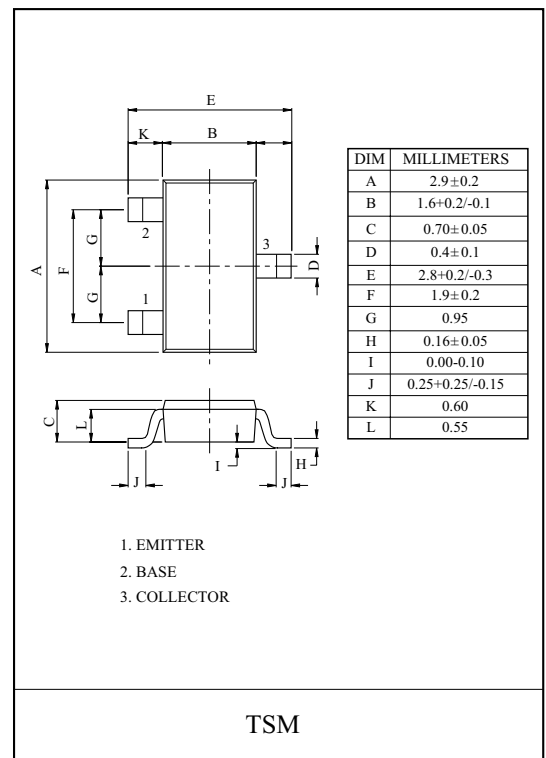
### FEATURES

- 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 KTC3542T.

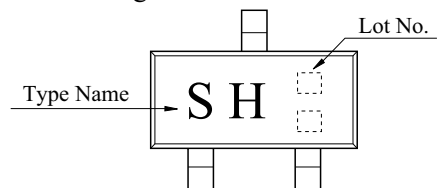
### MAXIMUM RATING (Ta=25 °C)

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	$I_C$	-3
	Pulse	$I_{CP}$	-5
Base Current	$I_B$	-600	mA
Collector Power Dissipation	$P_C^*$	0.9	W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

\* Package mounted on a ceramic board (600mm<sup>2</sup> × 0.8mm)



### Marking

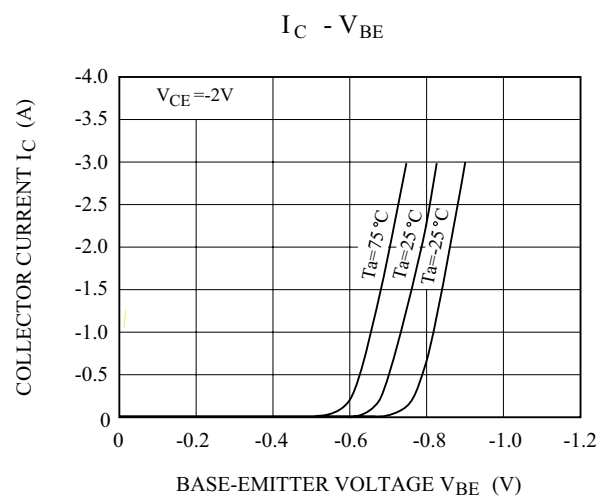
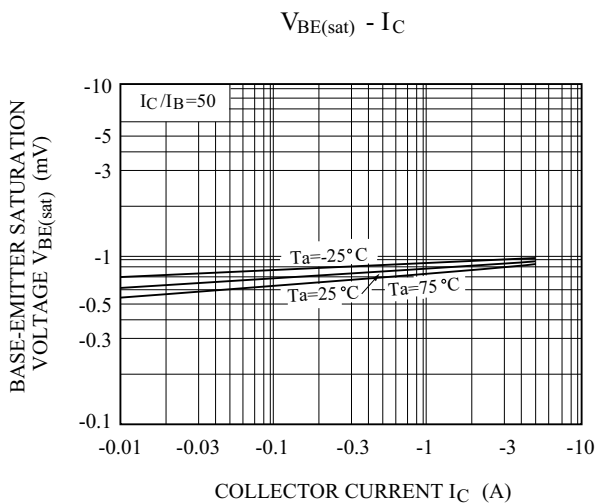
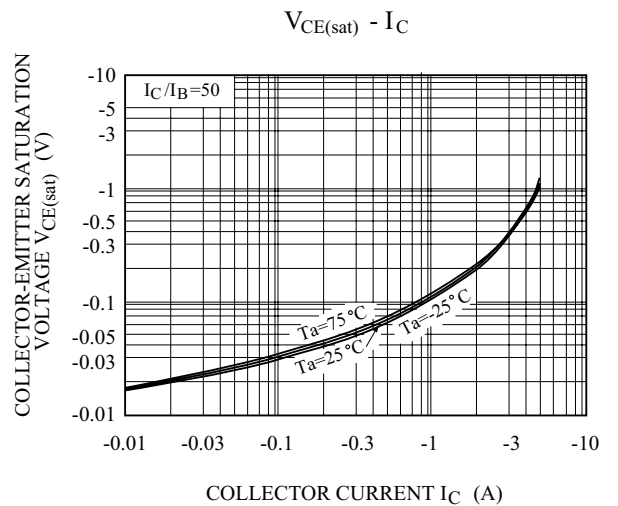
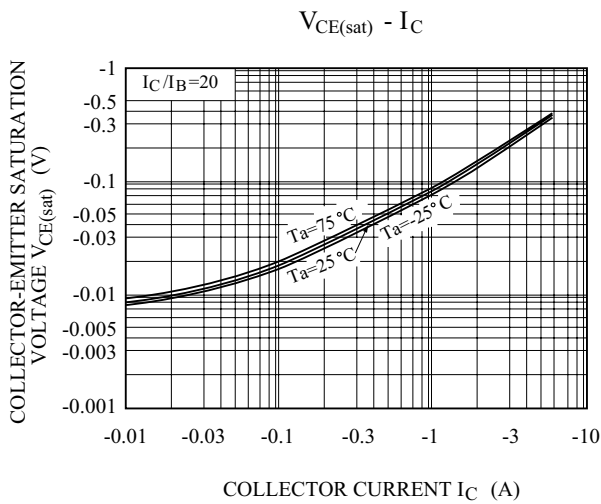
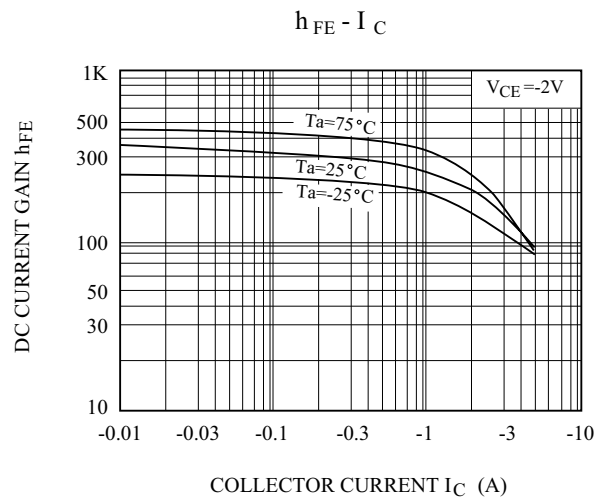
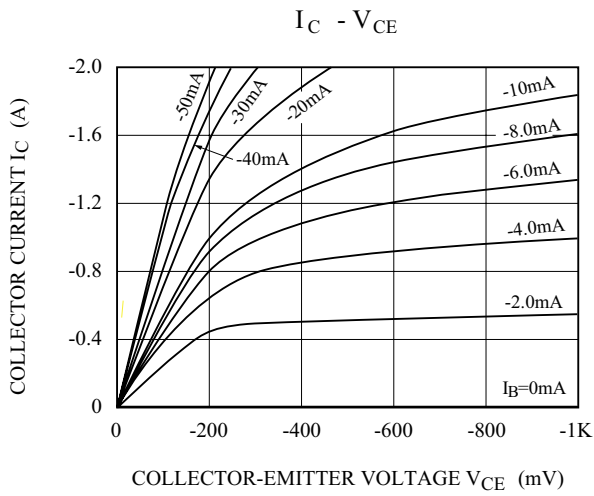


### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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	$V_{CE(sat)1}$	$I_C=-1.5A, I_B=-30mA$	-	-155	-230	mV
	$V_{CE(sat)2}$	$I_C=-1.5A, I_B=-75mA$	-	-105	-155	mV
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-1.5A, I_B=-30mA$	-	-0.83	-1.2	V
DC Current Gain	$h_{FE}$	$V_{CE}=-2V, I_C=-500mA$	200	-	560	
Transition Frequency	$f_T$	$V_{CE}=-10V, I_C=-500mA$	-	380	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-10V, f=1MHz$	-	25	-	pF
Switching Time	Turn-On Time	$t_{on}$	-	50	-	nS
	Storage Time	$t_{stg}$	-	270	-	
	Fall Time	$t_f$	-	25	-	

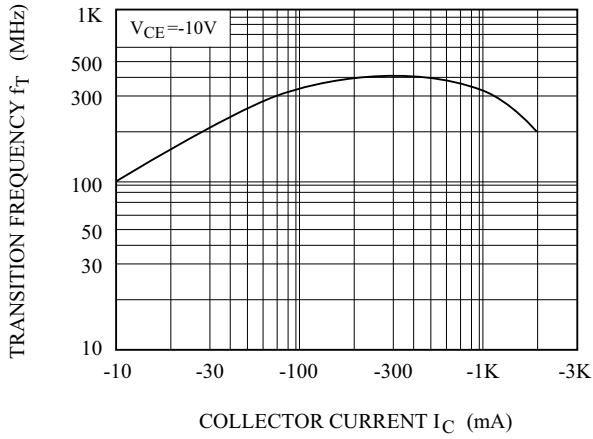
$PW=20\mu s$   
 $DC \leq 1\%$   
 $-I_{B1}$   
 $I_{B2}$   
 INPUT  
 $50\Omega$   
 $V_R$   
 $R_B$   
 $100\mu F$   
 $470\mu F$   
 $V_{BE}=5V$   
 $V_{CC}=-12V$   
 $24\Omega$   
 OUTPUT  
 $-20I_{B1}=20I_{B2}=I_C=-500mA$

# KTA1542T

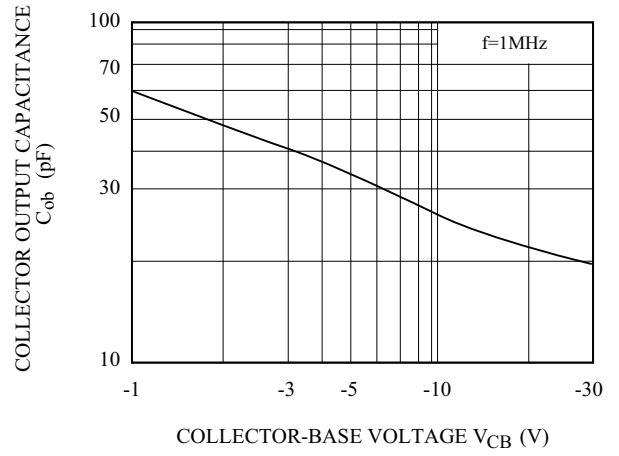


# KTA1542T

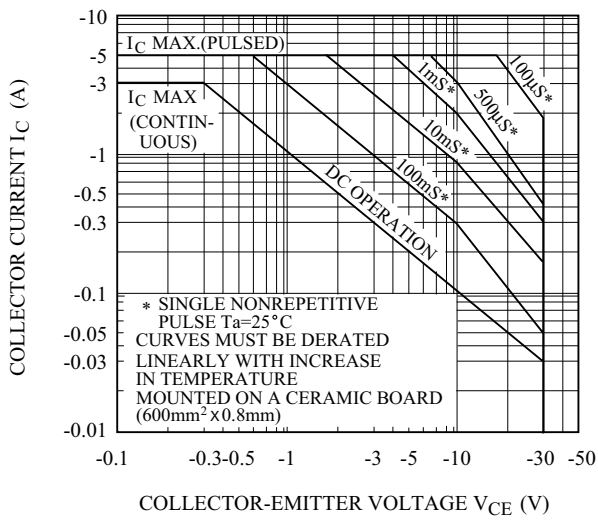
$f_T - I_C$



$C_{ob} - V_{CB}$



SAFE OPERATING AREA



$P_c - T_a$

