

DC-DC CONVERTERS RELAY DRIVERS, LAMP DRIVERS,  
MOTOR DRIVERS, STROBES APPLICATION.

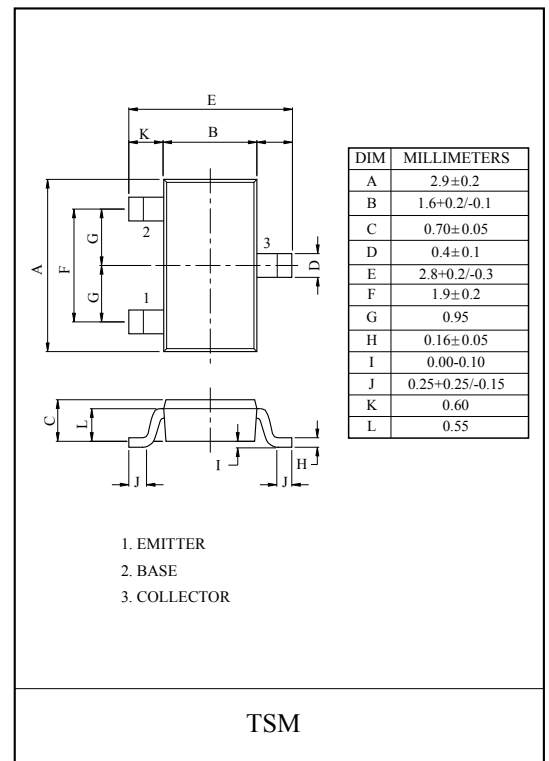
### FEATURES

- Adoption of FBET, MBIT Processes.
- High Current Capacitance.
- Low Collector-to-Emitter Saturation Voltage.
- High-Speed Switching.
- Ultrasmall Package Facilitates Miniaturization in end Products.
- High Allowable Power Dissipation.
- Complementary to KTA1552T.

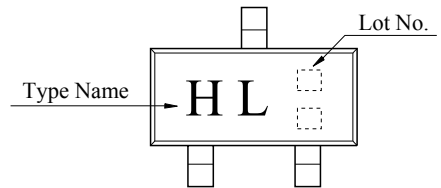
### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	80	V
Collector-Emitter Voltage		$V_{CES}$	80	V
		$V_{CEO}$	50	
Emitter-Base Voltage		$V_{EBO}$	6	V
Collector Current	DC	$I_C$	3	A
	Pulse	$I_{CP}$	6	
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

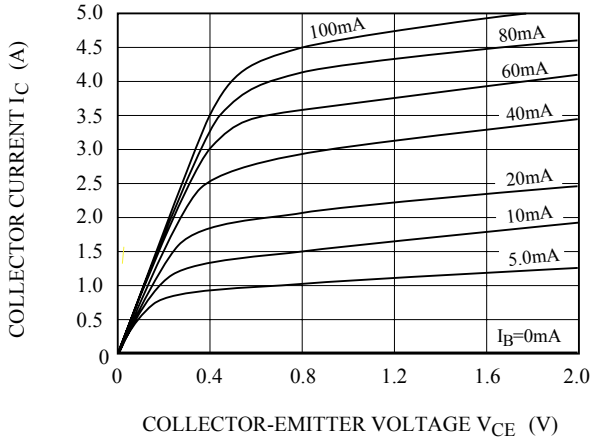


### ELECTRICAL CHARACTERISTICS (Ta=25°C)

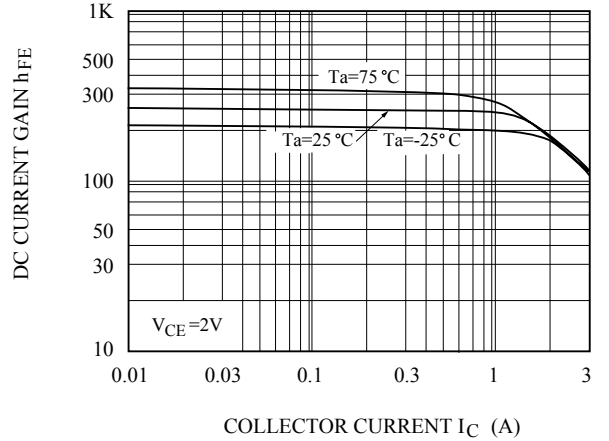
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=40V, I_E=0$	-	-	0.1	μA
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=4V, I_C=0$	-	-	0.1	μA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	80	-	-	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CES}$	$I_C=100\mu A, V_{BE}=0$	80	-	-	V
		$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6	-	-	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)1}$	$I_C=1A, I_B=50mA$	-	80	120	mV
		$V_{CE(sat)2}$	$I_C=2A, I_B=100mA$	-	140	210	mV
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=2A, I_B=100mA$	-	0.88	1.2	V
DC Current Gain		$h_{FE}$	$V_{CE}=2V, I_C=100mA$	200	-	560	
Transition Frequency		$f_T$	$V_{CE}=10V, I_C=500mA$	-	380	-	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10V, f=1MHz$	-	13	-	pF
Switching Time	Turn-On Time	$t_{on}$	<p>PW=20μs DC≤1%</p> <p><math>I_{B1}</math> <math>I_{B2}</math></p> <p>INPUT</p> <p>50Ω</p> <p><math>V_{BE}=-5V</math></p> <p>100μF</p> <p>470μF</p> <p>OUTPUT</p> <p><math>V_{CC}=25V</math></p> <p><math>10I_{B1}=-10I_{B2}=I_C=1A</math></p>	-	35	-	nS
	Storage Time	$t_{stg}$		-	300	-	
	Fall Time	$t_f$		-	22	-	

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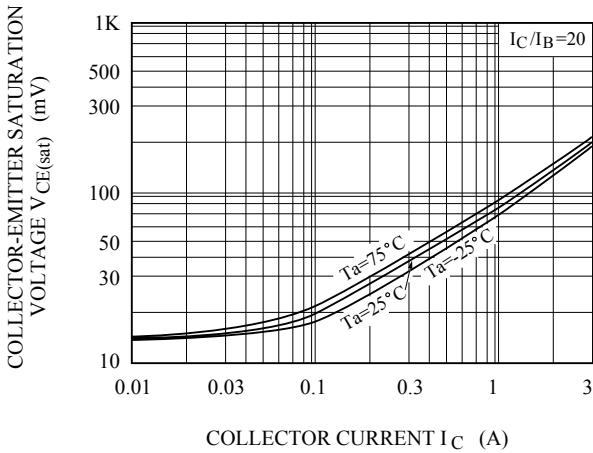
$I_C - V_{CE}$



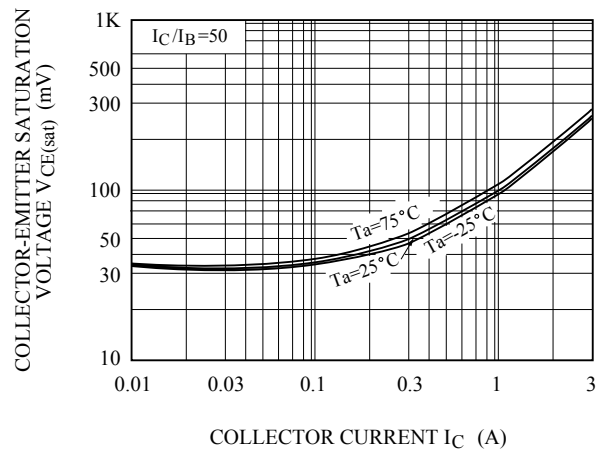
$h_{FE} - I_C$



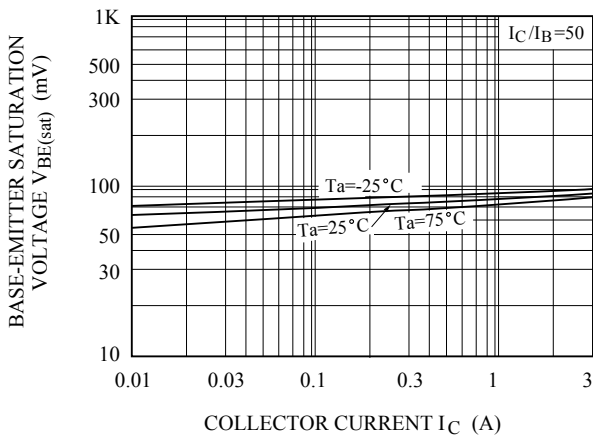
$V_{CE(sat)} - I_C$



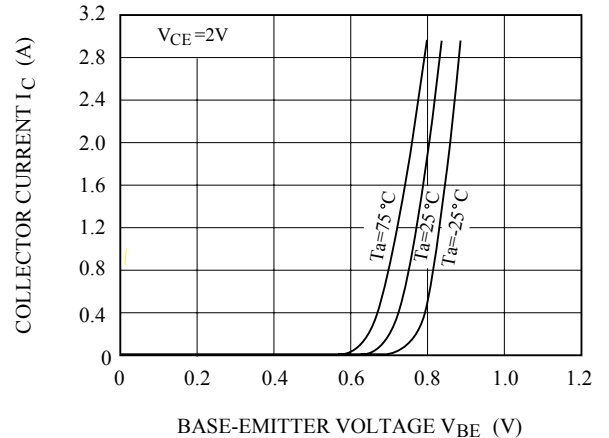
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$I_C - V_{BE}$



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