

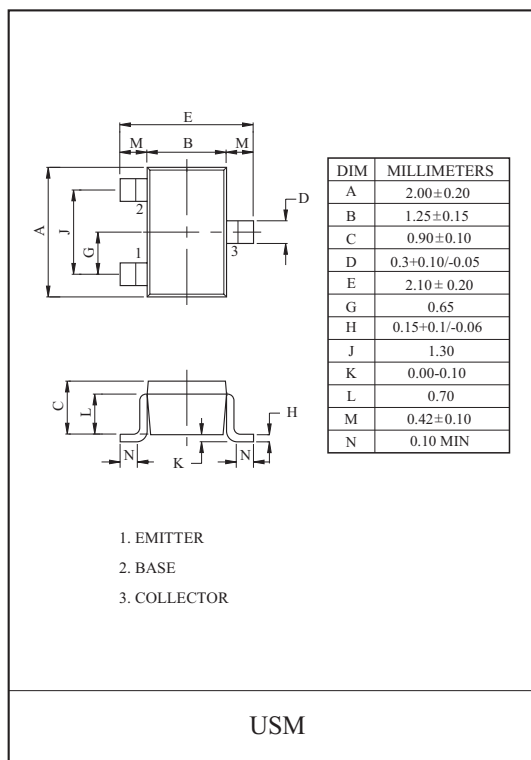
FOR LOW-FREQUENCY AMPLIFICATION.

### FEATURES

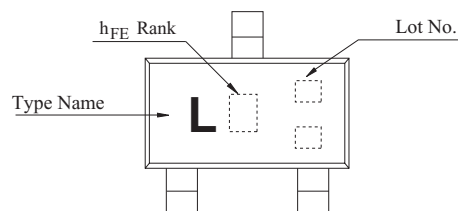
- High forward current transfer ratio  $h_{FE}$ .
- Low collector to emitter saturation voltage  $V_{CE(sat)}$ .
- High emitter to base voltage  $V_{EBO}$ .
- Low noise voltage NV.
- USM type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

### MAXIMUM RATINGS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	50	V
Collector-Emitter Voltage		$V_{CEO}$	40	V
Emitter-Base Voltage		$V_{EBO}$	15	V
Collector Current	DC	$I_C$	50	mA
	Pulse	$I_{CP}$	100	
Collector Power Dissipation		$P_C$	100	mW
Junction Temperature		$T_j$	150	
Storage Temperature Range		$T_{stg}$	-55 150	



### Marking



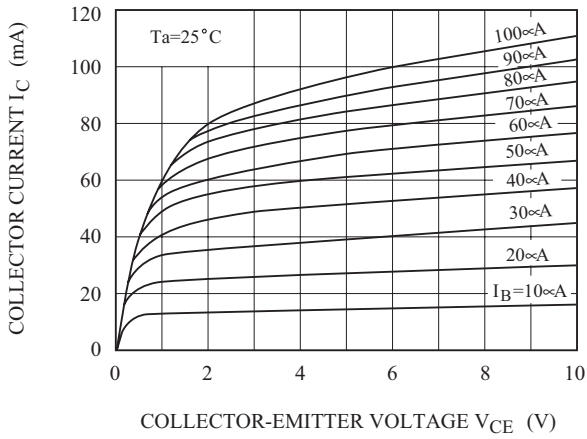
### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=20V, I_E=0$	-	-	100	nA
	$I_{CEO}$	$V_{CE}=20V, I_B=0$	-	-	1	μA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	40			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	15			V
DC Current Gain	$h_{FE}$ (Note)	$V_{CE}=10V, I_C=2mA$	400	1000	2000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$	-	0.05	0.2	V
Transition Frequency	$f_T$	$V_{CB}=10V, I_E=-2mA, f=200MHz$	-	120	-	MHz

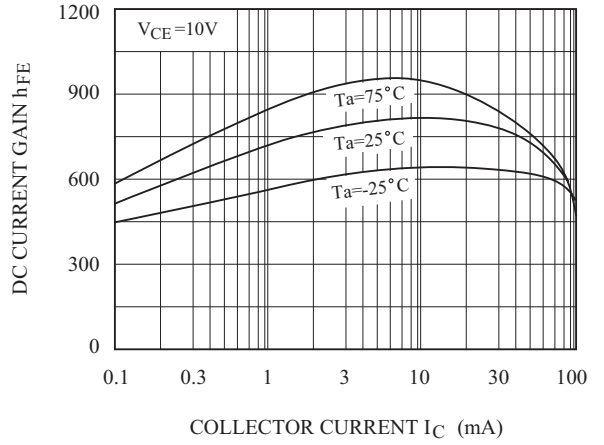
Note :  $h_{FE}$  Classification A:400~800, B:600~1200, C:1000~2000

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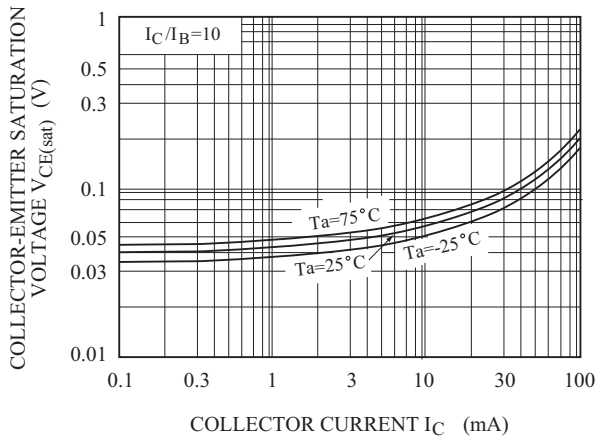
$I_C - V_{CE}$



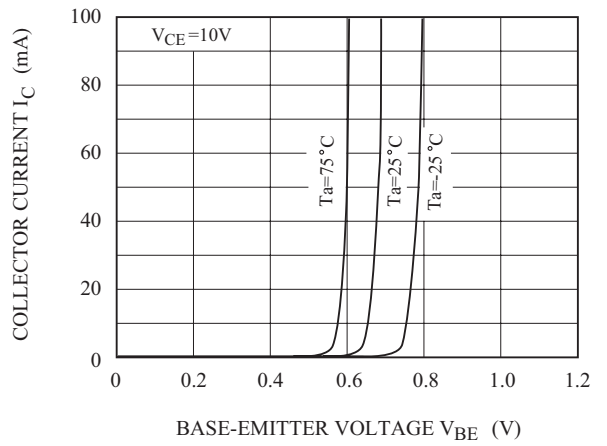
$h_{FE} - I_C$



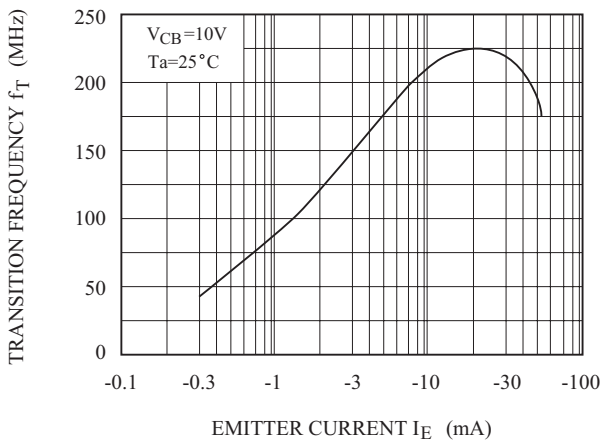
$V_{CE(sat)} - I_C$



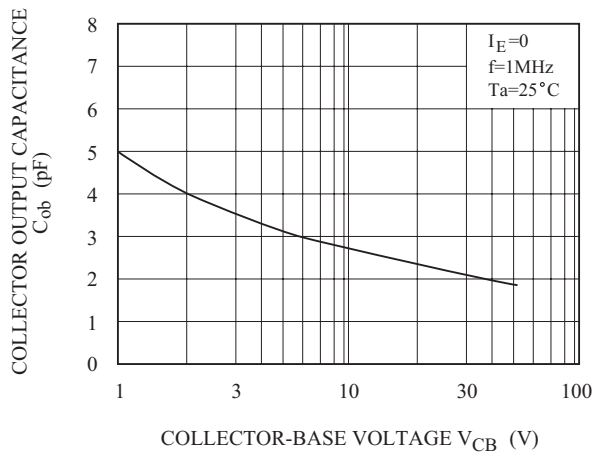
$I_C - V_{BE}$



$f_T - I_E$



$C_{ob} - V_{CB}$



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