

RoHS Compliant Product
 A suffix of "-C" specifies halogen & lead-free

FEATURES

- Excellent h_{FE} linearity
- Complements the 2SC5658-C

CLASSIFICATION OF h_{FE}

Product-Rank	2SA2029-Q-C	2SA2029-R-C	2SA2029-S-C
Range	120~270	180~390	270~560
Marking	FQ	FR	FS

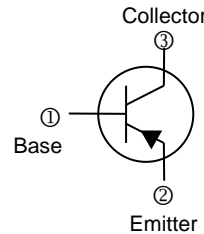
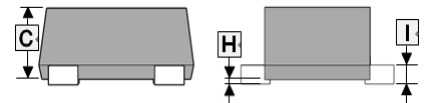
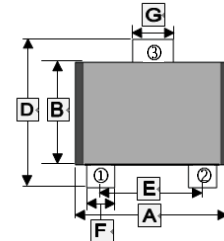
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-723	8K	7 inch

ORDER INFORMATION

Part Number	Type
2SA2029-Q-C	Lead (Pb)-free and Halogen-free
2SA2029-R-C	
2SA2029-S-C	

SOT-723



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.15	1.25	F	0.17	0.27
B	0.75	0.85	G	0.27	0.37
C	-	0.50	H	0	0.05
D	1.15	1.25	I	-	0.15
E	0.80 TYP.				

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

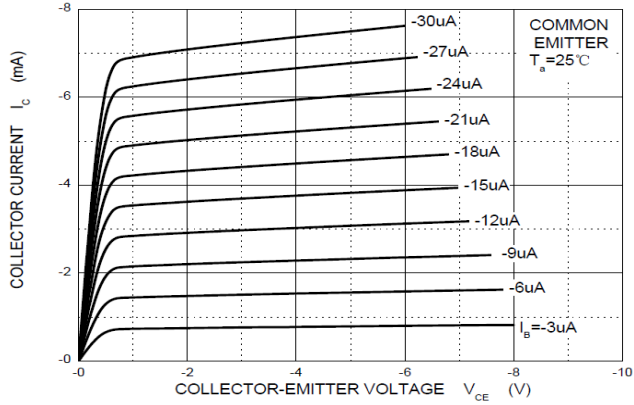
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CB0}	-60	V
Collector to Emitter Voltage	V_{CE0}	-50	V
Emitter to Base Voltage	V_{EB0}	-6	V
Continuous Collector Current	I_C	-150	mA
Collector Dissipation	P_C	150	mW
Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

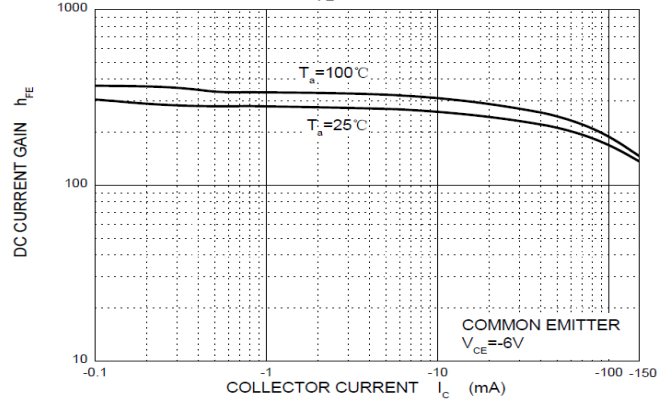
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector to Base Breakdown Voltage	$V_{(BR)CB0}$	-60	-	-	V	$I_C = -50\mu\text{A}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CE0}$	-50	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EB0}$	-6	-	-	V	$I_E = -50\mu\text{A}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -60\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -6\text{V}, I_C = 0$
DC Current Gain	h_{FE}	120	-	560		$V_{CE} = -6\text{V}, I_C = -1\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.5	V	$I_C = -50\text{mA}, I_B = -5\text{mA}$
Transition Frequency	f_T	-	140	-	MHz	$V_{CE} = -12\text{V}, I_C = -2\text{mA}, f = 30\text{MHz}$
Collector Output Capacitance	C_{ob}	-	-	5	pF	$V_{CB} = -12\text{V}, I_E = 0, f = 1\text{MHz}$

CHARACTERISTIC CURVES

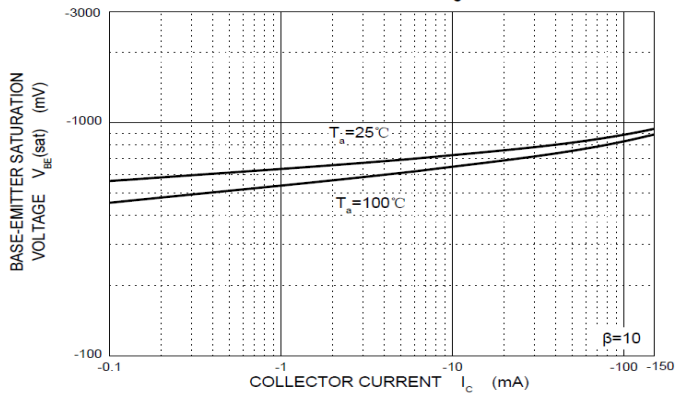
Static Characteristic



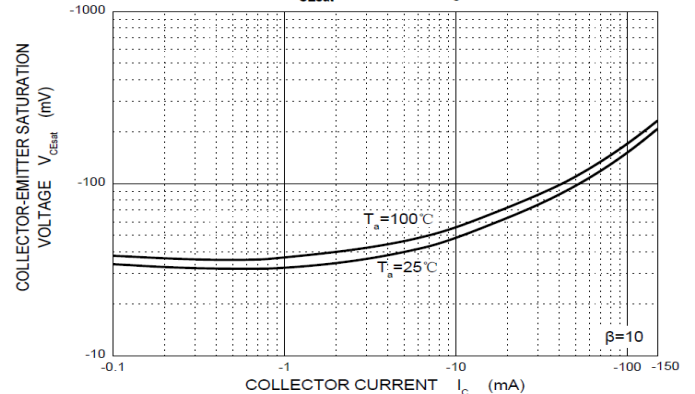
h_{FE} — I_c



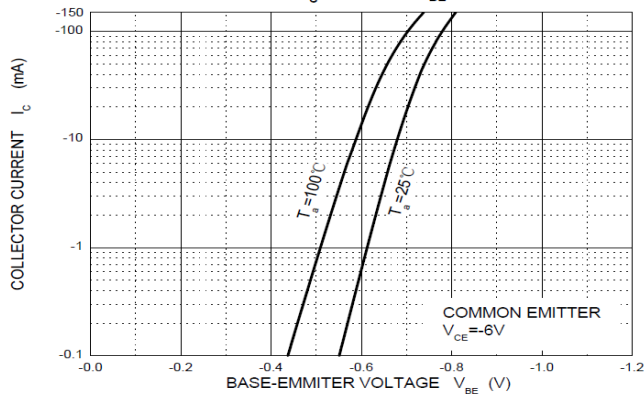
V_{BEsat} — I_c



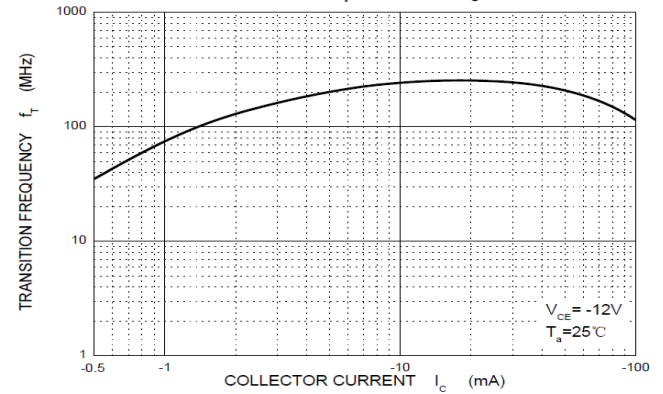
V_{CEsat} — I_c



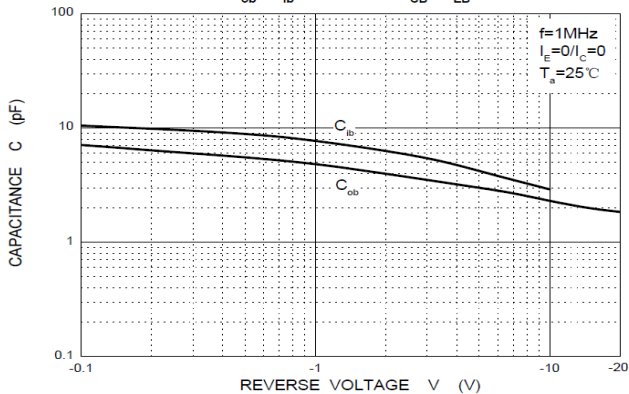
I_c — V_{BE}



f_T — I_c



C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

