

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

FEATURES

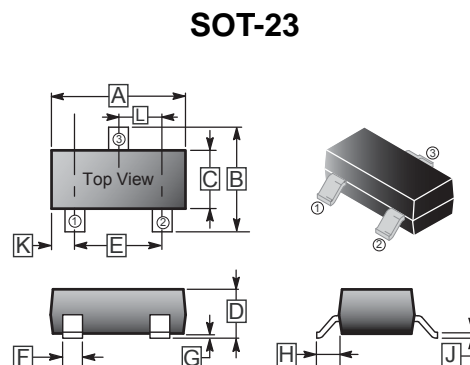
- Excellent hFE Linearity
- Low noise
- Complementary to A733

MARKING

Product	Marking Code
C945	CR

PACKAGE INFORMATION

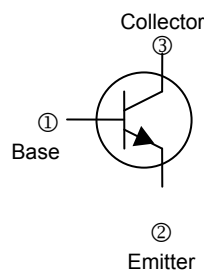
Package	MPQ	LeaderSize
SOT-23	3K	7' inch



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.04	G	-	0.18
B	2.10	2.80	H	0.40	0.60
C	1.20	1.60	J	0.08	0.20
D	0.89	1.40	K	0.6 REF.	
E	1.78	2.04	L	0.85	1.15
F	0.30	0.50			

CLASSIFICATION OF $h_{FE(1)}$

Product-Rank	C945-L	C945-H
Range	130-200	200-400



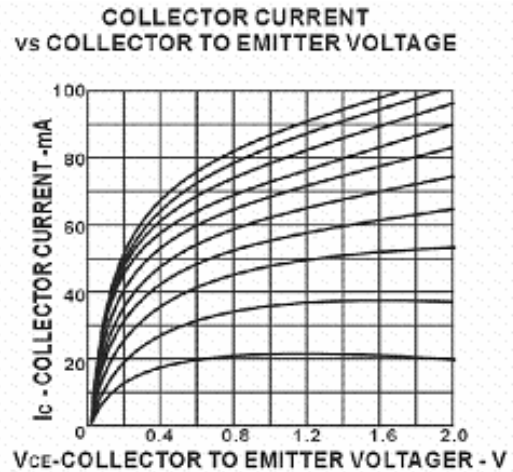
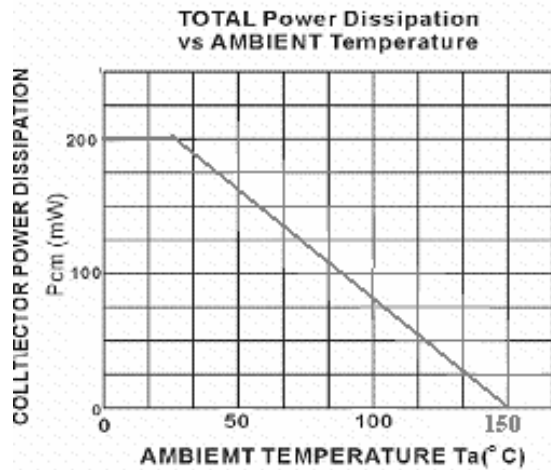
MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	50	V
Emitter - Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	150	mA
Collector Power Dissipation	P_C	200	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

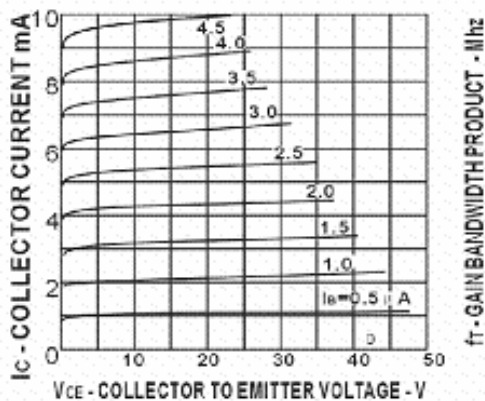
ELECTRICAL CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	$I_C = 100\mu\text{A}, I_E = 0$	$V_{(BR)CBO}$	60	-	-	V
Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}, I_B = 0$	$V_{(BR)CEO}$	50	-	-	V
Emitter-Base Breakdown Voltage	$I_E = 0.1\mu\text{A}, I_C = 0$	$V_{(BR)EBO}$	5	-	-	V
Collector Cut-Off Current	$V_{CB} = 60\text{V}, I_E = 0$	I_{CBO}	-	-	0.1	μA
Collector Cut-Off Current	$V_{CE} = 55\text{V}, R = 10\text{m}\Omega$	I_{CER}	-	-	0.1	μA
Emitter Cut-Off Current	$V_{EB} = 5\text{V}, I_C = 0$	I_{EBO}	-	-	0.1	μA
DC Current Gain	$V_{CE} = 6\text{V}, I_C = 1\text{mA}$	$h_{FE(1)}$	130	-	400	
	$V_{CE} = 6\text{V}, I_C = 0.1\text{mA}$	$h_{FE(2)}$	40	-	-	
Collector-Emitter Saturation Voltage	$I_C = 100\text{mA}, I_B = 10\text{mA}$	$V_{CE(sat)}$	-	-	0.3	V
Base-Emitter Saturation Voltage	$I_C = 100\text{mA}, I_B = 10\text{mA}$	$V_{BE(sat)}$	-	-	1	V
Transition frequency	$V_{CE} = 6\text{V}, I_C = 10\text{mA}, f = 30\text{MHz}$	f_T	150	-	-	MHz
Collector output capacitance	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	C_{ob}	-	-	3.0	pF
Noise figure	$V_{CE} = 6\text{V}, I_C = 0.1\text{mA}, R_g = 10\text{k}\Omega, f = 1\text{kHz}$	NF	-	4	10	dB

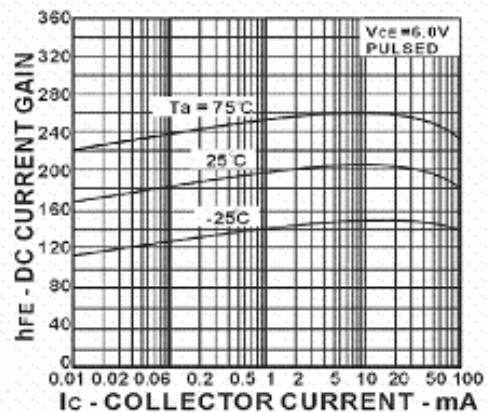
CHARACTERISTIC CURVES



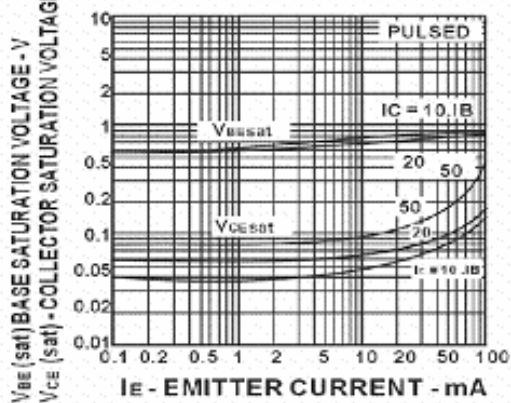
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



COLLECTOR AND BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



DC CURRENT GAIN vs. COLLECTOR CURRENT

