

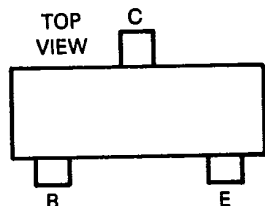
6367255 MOTOROLA SC (DIODES/OPTO)

34C 38279 D

T-31-19

SOT23 (continued)

DEVICE NO. **MMBC1321Q2** thru
MMBC1321Q5
 SMALL-SIGNAL NPN TRANSISTORS



- Designed for VHF/RF Amplifier, low-noise, high-gain bandwidth applications.

Device	Marking
MMBC1321Q2	Q2
MMBC1321Q3	Q3
MMBC1321Q4	Q4
MMBC1321Q5	Q5

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	25	Vdc
Collector-Base Voltage	V_{CBO}	30	Vdc
Emitter-Base Voltage	V_{EB}	4.0	Vdc
Collector Current	I_C	10	mA dc

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

Parameter	Test Conditions	Min	Typ	Max	Unit
I_{CBO}	$V_{CB} = 25 \text{ Vdc}, I_E = 0$	—	—	0.1	$\mu\text{A dc}$
I_{EBO}	$V_{EB} = 4.0 \text{ Vdc}, I_C = 0$	—	—	0.1	$\mu\text{A dc}$
h_{FE}	$I_C = 2.0 \text{ mA dc}, V_{CE} = 6.0 \text{ Vdc}$				
	MMBC1321Q2	40	—	80	—
	MMBC1321Q3	60	—	120	—
	MMBC1321Q4	90	—	180	—
	MMBC1321Q5	135	—	270	—
$V_{CE(sat)}$	$I_C = 10 \text{ mA dc}, I_B = 1.0 \text{ mA dc}$	—	—	0.6	Vdc
f_T	$I_C = 2.0 \text{ mA dc}, V_{CE} = 6.0 \text{ Vdc}, f = 100 \text{ MHz}$	600	—	900	MHz
C_{ob}	$V_{CB} = 6.0 \text{ Vdc}, I_E = 0, f = 100 \text{ MHz}$	—	1.3	1.8	pF
NF	$V_{CE} = 6.0 \text{ Vdc}, I_E = 2.0 \text{ mA dc}, f = 900 \text{ MHz}, R_G = 50 \Omega$	—	5.0	—	dB