

Boca Semiconductor Corp.

BSC

These Are High Voltage & High Current, General Purpose Transistors

ABSOLUTE MAXIMUM RATINGS.

DESCRIPTION	SYMBOL	2N5679 2N5681	2N5680 2N5682	UNITS
Collector -Emitter Voltage	VCEO	100	120	V
Collector -Base Voltage	VCBO	100	120	V
Emitter -Base Voltage	VEBO		4.0	V
Collector Current Continuous	IC		1.0	A
Base Current	IB		0.5	A
Power Dissipation @Ta=25 degC	PD		1.0	W
Derate Above 25deg C			5.7	mW/deg C
Power Dissipation @Tc=25 degC	PD		10	W
Derate Above 25deg C			57	mW/deg C
Operating And Storage Junction Temperature Range	Tj, Tstg	-65 to +200		deg C
THERMAL RESISTANCE				
Junction to Case	Rth(j-c)		17.5	deg C/W
Junction to Ambient	Rth(j-a)		175	deg C/W

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	2N5679 2N5681	2N5680 2N5682	UNITS
Collector -Emitter Voltage	VCEO(sus)	IC=10mA, IB=0	>100	>120	V
Collector-Cut off Current	ICBO	VCB=100V, IE=0	<1.0	-	uA
		VCB=120V, IE=0	-	<1.0	uA
	ICEO	VCE=70V, IB=0	<10	-	uA
		VCE=80V, IB=0	-	<10	uA
	ICEX	VCE=100V, VEB=1.5V	<1.0	-	uA
		VCE=120V, VEB=1.5V	-	<1.0	uA
Emitter-Cut off Current	IEBO	TC=150 deg C VCE=100V, VEB=1.5V	<1.0	-	mA
		VCE=120V, VEB=1.5V	-	<1.0	mA
		VEB=4V, IC=0	<1.0	<1.0	uA

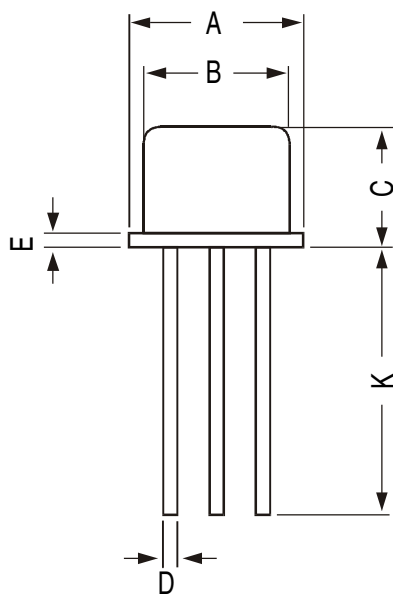
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

2N5679-82

DESCRIPTION	SYMBOL	TEST CONDITION	2N5679	2N5680	UNITS
			2N5681	2N5682	
DC Current Gain	hFE*	IC=1A, VCE=2V	>5.0	-	
		IC=250mA, VCE=2V	40-150	40-150	
Collector Emitter Saturation Voltage	VCE(Sat)*	IC=250mA, IB=25mA	<0.60	<0.60	V
		IC=500mA, IB=50mA	<1.0	<1.0	V
		IC=1A, IB=200mA	<2.0	<2.0	V
Base Emitter on Voltage	VBE(on)*	IC=250mA, VCE=2V	<1.0	<1.0	V
SMALL SIGNAL CHARACTERISTICS					
Small Signal Current Gain	hfe	IC=200mA, VCE=1.5V	>20	>20	
Out-Put Capacitance	Cob	VCB=20V, IE=0	<50	<50	pF
		f=1MHz			
Transistors Frequency	ft	IC=100mA, VCE=10V	>30	>30	MHz
		f=10MHz			

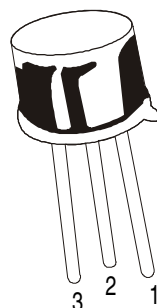
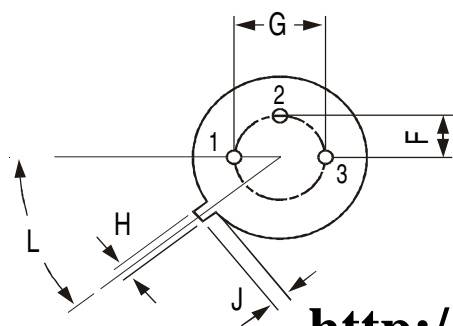
***Pulse Test: Pulse Width: =300us, Duty Cycle=2%**

TO-39 Metal Can Package



All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR