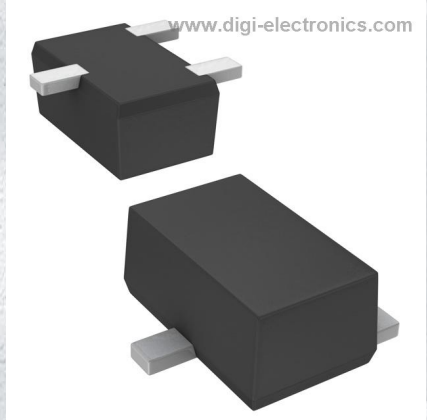
2SC39380RL Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	2SC39380RL-DG
Manufacturer	Panasonic Electronic Components
Manufacturer Product Number	2SC39380RL
Description	TRANS NPN 40V 0.1A SMINI3
Detailed Description	Bipolar (BJT) Transistor NPN 40 V 100 mA 450MHz 150 mW Surface Mount SMini3-G1

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
2SC39380RL	Panasonic Electronic Components
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	100 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
40 V	250mV @ 1mA, 10mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	90 @ 10mA, 1V
Power - Max:	Frequency - Transition:
150 mW	450MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
SC-70, SOT-323	SMini3-G1
Base Product Number:	
2SC3938	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	ECCN:
1 (Unlimited)	EAR99
HTSUS:	
8541.21.0075	

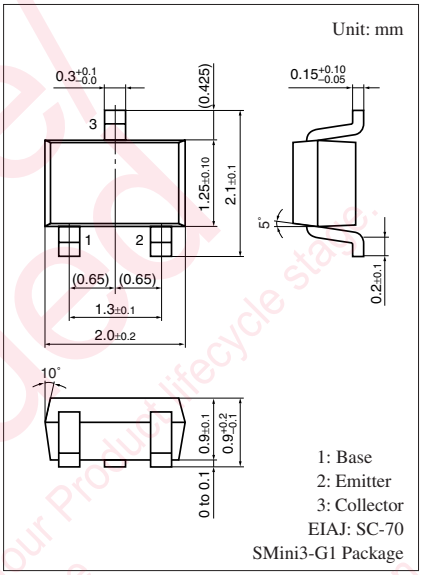
2SC3938

Silicon NPN epitaxial planar type

For high-speed switching

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing



Marking Symbol: 2Y

■ Absolute Maximum Ratings $T_a = 25°C$

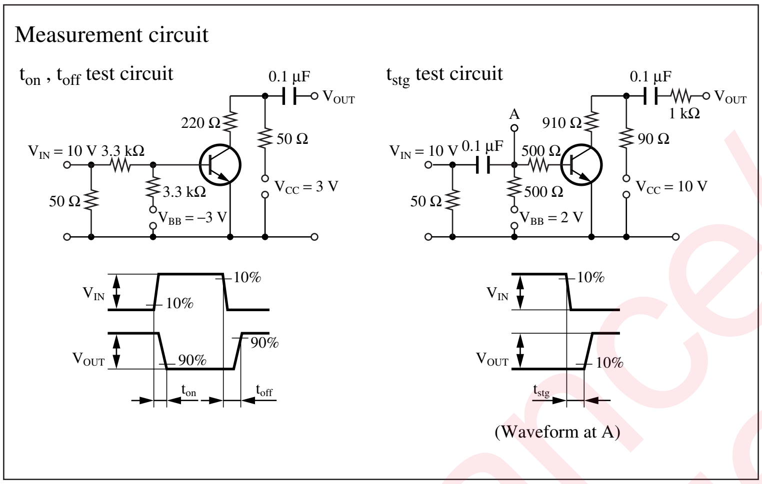
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	40	V
Collector-emitter voltage (E-B short)	V_{CES}	40	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	100	mA
Peak collector current	I_{CP}	300	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

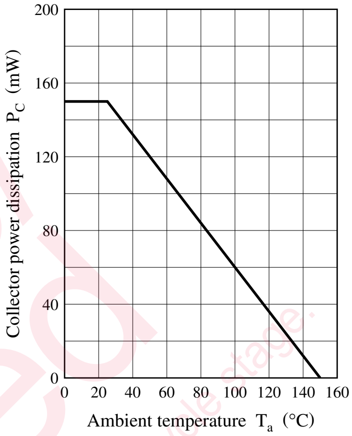
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 40 V, I_E = 0			0.1	µA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 4 V, I_C = 0			0.1	µA
Forward current transfer ratio *	h_{FE}	V_{CE} = 1 V, I_C = 10 mA	60		200	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10 mA, I_B = 1 mA		0.17	0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 10 mA, I_B = 1 mA			1	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = −10 mA, f = 200 MHz		450		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		2	6	pF
Turn-on time	t_{on}	Refer to the measurement circuit		17		ns
Turn-off time	t_{off}			17		ns
Storage time	t_{stg}			10		ns

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

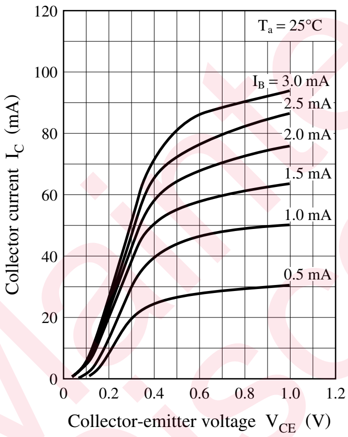
Rank	Q	R
h_{FE}	60 to 120	90 to 200



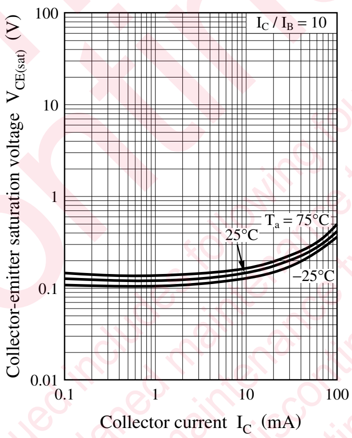
P_C — T_a



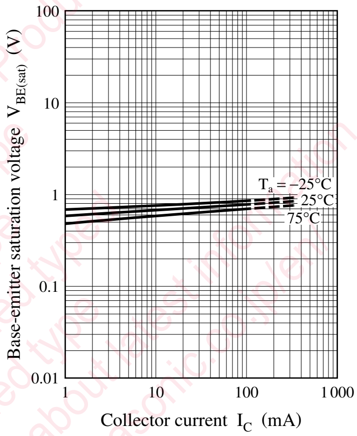
I_C — V_{CE}



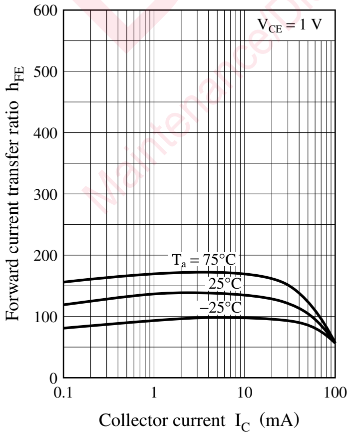
$V_{CE(sat)}$ — I_C



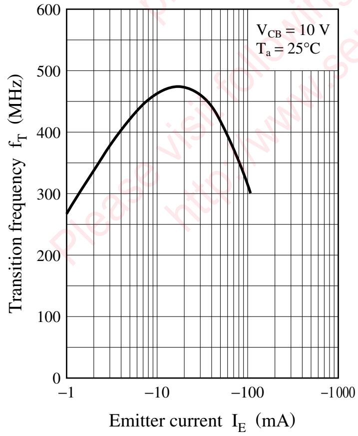
$V_{BE(sat)}$ — I_C



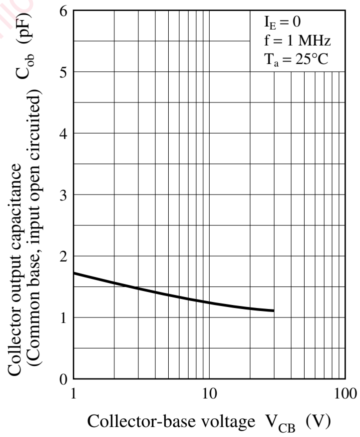
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



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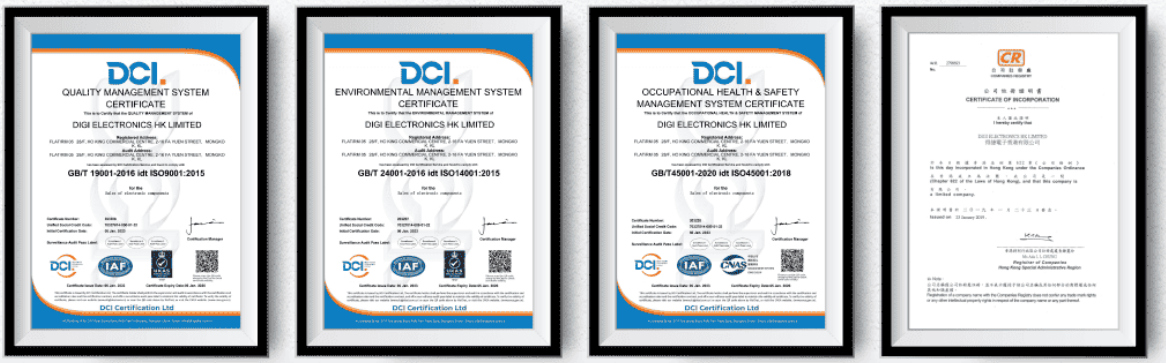

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