MSKSEMI















ESD

TVS

TSS

MOV

GDT

PLED

Broduct data sheet



SOT-223

1. BASE

2. COLLECTOR

3. EMITTER



- - For AF driver and output stages

BCP51-MS.52-MS,53-MS TRANSISTOR (PNP)

High collector current

FEATURES

- Low collector-emitter saturation voltage
- Complementary types: BCP54...BCP56 (NPN)

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	BCP51-MS	BCP52-MS	BCP53-MS	Unit
V _{CBO}	Collector-Base Voltage	-45	-60	-100	V
V _{CEO}	Collector-Emitter Voltage	-45	-60	-80	V
V _{EBO}	Emitter-Base Voltage	-5		V	
Ic	Collector Current -Continuous	-1		Α	
Pc	Collector Power Dissipation	1.5		W	
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	94		°C/W	
T _{stg}	Storage Temperature Range	-65~+150		℃	

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BCP51			-45		
	BCP52	$V_{(BR)CBO}$	I _C =- 0.1mA,I _E =0	-60		V
	BCP53			-100		
Collector-emitter breakdown voltage	BCP51			-45		
	BCP52	$V_{(BR)CEO}$	I_C = -10mA, I_B =0	-60		V
	BCP53			-80		
Base-emitter breakdown voltage		$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5		V
Collector cut-off current		I _{CBO}	V _{CB} = -30 V, I _E =0		-100	nA
		h _{FE(1)}	V _{CE} =-2V, I _C =-5mA	25		
DC current gain		h _{FE(2)}	V _{CE} = -2V, I _C =-150m A	63	250	
		h _{FE(3)}	V _{CE} = -2V, I _C =-500m A	25		
Collector-emitter saturation voltage		V _{CE(sat)}	I _C =-500mA,I _B =-50mA		-0.5	V
Base-emitter voltage		V _{BE}	V _{CE} =-2V, I _C =-500m A		-1	V
Transition frequency		f _T	V _{CE} =-10V,I _C =-50mA,f=100MHz	100		MHz

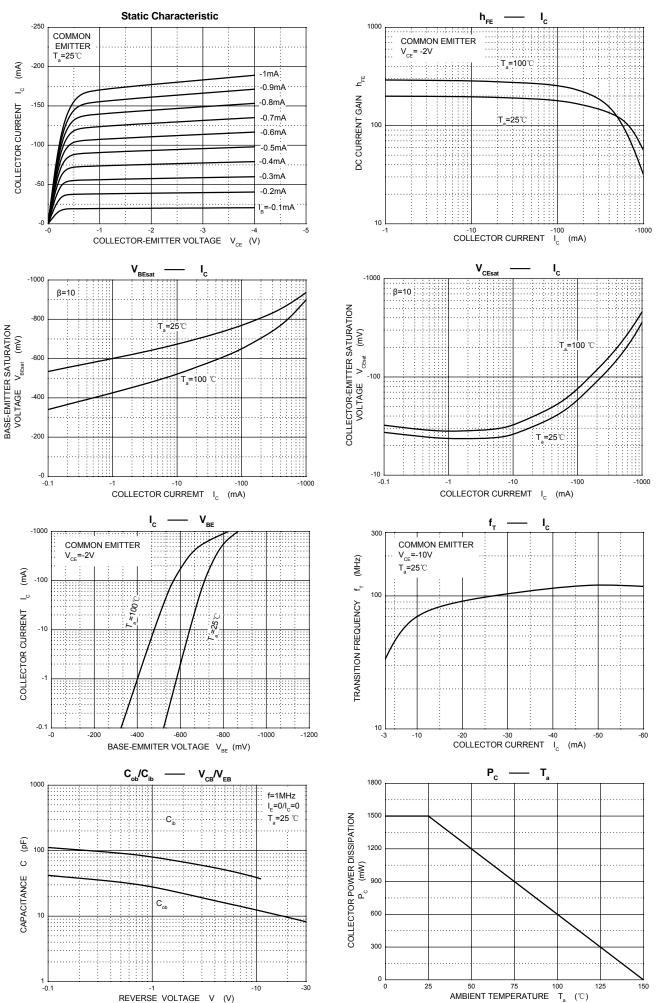
CLASSIFICATION OF h_{FE(2)}

TypE	BCP51-10,BCP52-10,BCP53-10	BCP51-16,BCP52-16,BCP53-16
Range	63-160	100-250

Semiconductor

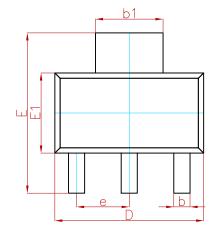
Compiance

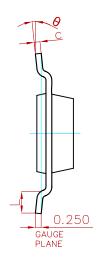
Typical Characteristics

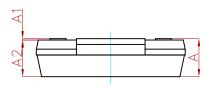




PACKAGE MECHANICAL DATA

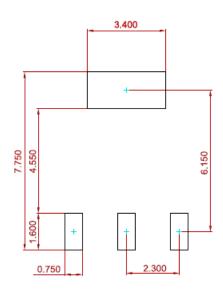






Symbol	Dimensions In	n Millimeters	Dimensions In Inches		
Symbol	Min.	Max.	Min.	Max.	
Α		1.800		0.071	
A1	0.020	0.100	0.001	0.004	
A2	1.500	1.700	0.059	0.067	
b	0.660	0.840	0.026	0.033	
b1	2.900	3.100	0.114	0.122	
С	0.230	0.350	0.009	0.014	
D	6.300	6.700	0.248	0.264	
E	6.700	7.300	0.264	0.287	
E1	3.300	3.700	0.130	0.146	
е	2.300(BSC)		0.091(BSC)		
L	0.750		0.030		
θ	0°	10°	0°	10°	

Suggested Pad Layout



Note:

- 1.Controlling dimension:in millimeters.
- 2.General tolerance:±0.050mm.
- 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BCP51-MS BCP52-MS BCP53-MS	SOT-223	1000

Semiconductor Compiance

Attention

- Any and all MSKSEMI Semiconductor products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your MSKSEMI Semiconductor representative nearest you before using any MSKSEMI Semiconductor products described or contained herein in such applications.
- MSKSEMI Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specificationsof any andall MSKSEMI Semiconductor products described orcontained herein.
- Specifications of any and all MSKSEMI Semiconductor products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- MSKSEMI Semiconductor, strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with someprobability. It is possiblethat these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits anderror prevention circuitsfor safedesign, redundant design, and structural design.
- In the event that any or all MSKSEMI Semiconductor products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from theauthorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of MSKSEMI Semiconductor.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. MSKSEMI Semiconductor believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringementsof intellectual property rights or other rightsof third parties.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. Whendesigning equipment, referto the "Delivery Specification" for the MSKSEMI Semiconductor productthat you intend to use.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Bipolar Transistors - BJT category:

Click to view products by MSKSEMI manufacturer:

Other Similar products are found below:

619691C MCH4017-TL-H MMBT-2369-TR BC546/116 BC557/116 BSW67A NJVMJD148T4G NTE123AP-10 NTE153MCP NTE16

NTE195A NTE92 C4460 2N4401-A 2N6728 2SA1419T-TD-H 2SA2126-E 2SB1204S-TL-E 2SC2712S-GR,LF 2SC5488A-TL-H

2SD2150T100R SP000011176 2N2907A 2N3904-NS 2N5769 2SC2412KT146S 2SD1816S-TL-E CPH6501-TL-E MCH4021-TL-E

MJE340 US6T6TR NJL0281DG 732314D CPH3121-TL-E CPH6021-TL-H 873787E IMZ2AT108 UMX21NTR MCH6102-TL-E

NJL0302DG 2N3583 30A02MH-TL-E NSV40301MZ4T1G NTE13 NTE26 NTE282 NTE323 NTE350 NTE81 STX83003-AP