JANTXV2N5154 Datasheet

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DiGi Electronics Part Number	JANTXV2N5154-DG
Manufacturer	MACOM Technology Solutions
Manufacturer Product Number	JANTXV2N5154
Description	TRANS NPN 80V 2A TO39
Detailed Description	Bipolar (BJT) Transistor NPN 80 V 2 A 1 W Through Hole TO-39 (TO-205AD)

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
JANTXV2N5154	MACOM Technology Solutions
Series:	Product Status:
-	Discontinued at Digi-Key
Transistor Type:	Current - Collector (Ic) (Max):
NPN	2 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
80 V	1.5V @ 500mA, 5A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
50µA	70 @ 2.5A, 5V
Power - Max:	Frequency - Transition:
1 W	-
Operating Temperature:	Grade:
-65°C ~ 200°C (TJ)	Military
Qualification:	Mounting Type:
MIL-PRF-19500/544	Through Hole
Package / Case:	Supplier Device Package:
TO-205AD, TO-39-3 Metal Can	TO-39 (TO-205AD)

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
RoHS non-compliant	1 (Unlimited)
ECCN:	HTSUS:
EAR99	8541.29.0095

NEW

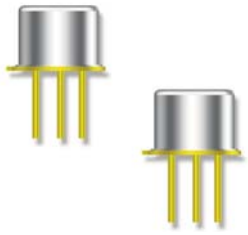
NPN Power Silicon Transistor

2N5152, 2N5152L & 2N5154, 2N5154L

AEROFLEX
A passion for performance.

Features

- Available in commercial, JAN, JANTX, JANTXV, JANS and JANSR 100K rads (Si) per MIL-PRF-19500/544
- TO-5 Package: 2N5152L, 2N5154L
  TO-39 (TO-205AD) Package: 2N5152, 2N5154



Maximum Ratings (T_C = +25°C unless otherwise noted)

Ratings	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	80	Vdc
Collector - Base Voltage	V_{CBO}	100	Vdc
Emitter - Base Voltage	V_{EBO}	5.5	Vdc
Collector Current	I_C	2.0	Adc
Total Power Dissipation @ T_A = +25 °C @ T_C = +25 °C	P_T	1.0 10	W
Operating & Storage Temperature Range	T_{op}, T_{stg}	-65 to +200	°C
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	10	°C/W

Electrical Characteristics (T_A = +25°C unless otherwise noted)

OFF Characteristics	Symbol	Mimimum	Maximum	Units
Collector - Emitter Breakdown Voltage I_C = 100 mAdc, I_B = 0	$V_{(BR)CEO}$	80	- - -	Vdc
Emitter - Base Cutoff Current V_{EB} = 4.0 Vdc, I_C = 0 V_{EB} = 5.5 Vdc, I_C = 0	I_{EBO}	- - -	1.0 1.0	µAdc mAdc
Collector - Emitter Cutoff Current V_{CE} = 60 Vdc, V_{BE} = 0 V_{CE} = 100 Vdc, V_{BE} = 0	I_{CES}	- - -	1.0 1.0	µAdc mAdc
Collector - Emitter Cutoff Current V_{CE} = 40 Vdc, I_B = 0	I_{CEO}	- - -	50	µAdc

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METELICS

AEROFLEX METELICS

2N5152, 2N5154
2N5152L, 2N5154L

Electrical Characteristics -con't

ON Characteristics		Symbol	Mimimum	Maximum	Units
Forward Current Transfer Ratio					
I_C = 50 mAdc, V_{CE} = 5.0 Vdc	2N5152	H_{FE}	20	- - -	
	2N5154		50	- - -	
I_C = 2.5 Adc, V_{CE} = 5.0 Vdc	2N5152		30	90	
	2N5154		70	200	
I_C = 5.0 Adc, V_{CE} = 5.0 Vdc	2N5152		20	- - -	
	2N5154		40	- - -	
Collector - Emitter Saturation Voltage					
I_C = 2.5 Adc, I_B = 250 mAdc		$V_{CE(sat)}$	- - -	0.75	Vdc
I_C = 5.0 Adc, I_B = 500 mAdc			- - -	1.5	
Emitter - Base Voltage Non-Saturation					
I_C = 2.5 Adc, V_{CE} = 5.0 Vdc		$V_{BE(ON)}$	- - -	1.45	Vdc
Emitter - Base Saturation Voltage					
I_C = 2.5 Adc, I_B = 250 mAdc		$V_{BE(sat)}$	- - -	1.45	Vdc
I_C = 5.0 Adc, I_B = 500 mAdc				2.2	
DYNAMIC Characteristics					
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio					
I_C = 500 mAdc, V_{CE} = 5.0 Vdc, f = 10 MHz	2N5152	$\lvert h_{fe} \rvert$	6	- - -	
	2N5154		7	- - -	
Small-signal short Circuit FOIWard-Current Transfer Ratio					
I_C = 100 mAdc, V_{CE} = 5 Vdc, f= 1KHz	2N5152	hfe	20	- - -	
	2N5I54		50	- - -	
Output Capacitance					
V_{CB} = 10 Vdc, I_E = 0, f = 1.0 MHz		C_{obo}	- - -	250	pF
SWITCHING Characteristics					
Turn-On Time		t_{on}	- - -	0.5	µs
I_C = 5.0 Adc; I_{B1} = 500 mAdc					
Turn-off Time		t_{off}	- - -	1.5	µs
R_L = 6 Ω					
Storage Time	I_{B2} = -500 mAdc	t_s	- - -	1.4	µs
Fall Time	$V_{BE(OFF)}$ = 3.7 Vdc	t_f	- - -	0.5	µs

SAFE OPERATING AREA

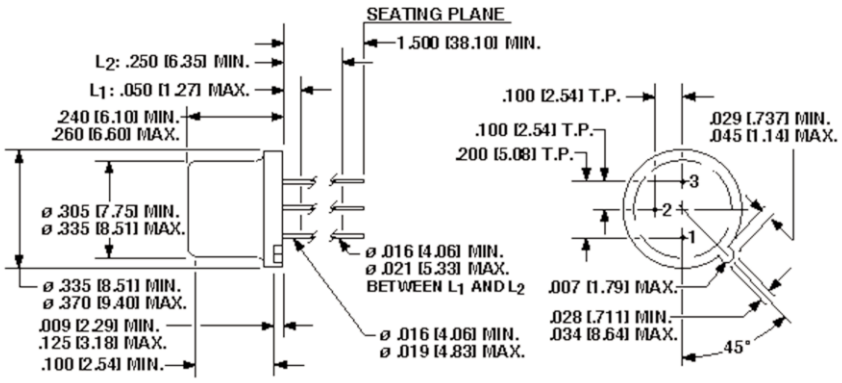
DC Tests:	T_C = +25 °C, 1 Cycle, t = 1.0 s
Test 1:	V_{CE} = 5.0 Vdc, I_C = 2.0 Adc
Test 2:	V_{CE} = 32.0 Vdc, I_C = 310 mAdc
Test 3:	V_{CE} = 80 Vdc, I_C = 12.5 mAdc

AEROFLEX METELICS

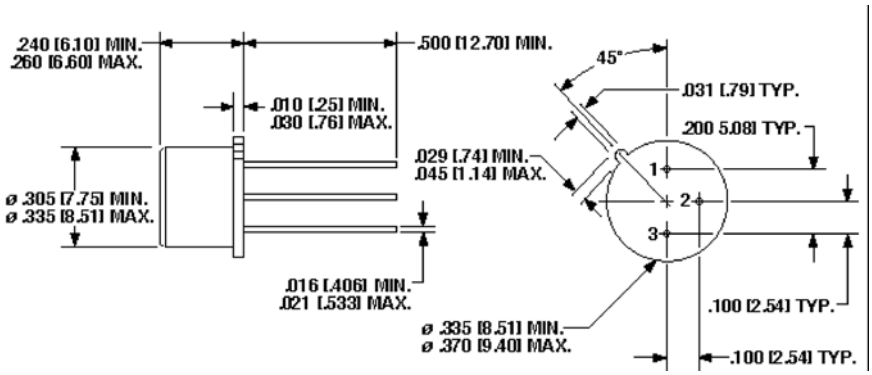
2N5152, 2N5154
2N5152L, 2N5154L

Outline Drawing

TO-5 Package: (2N5152L, 2N5154L)



TO-39 (TO-205AD) Package: (2N5152, 2N5154)



NOTE: Dimensions in Inches [mm]

Aeroflex / Metelics, Inc.

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A passion for performance.

Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.

Revision Date: 4/22/2014

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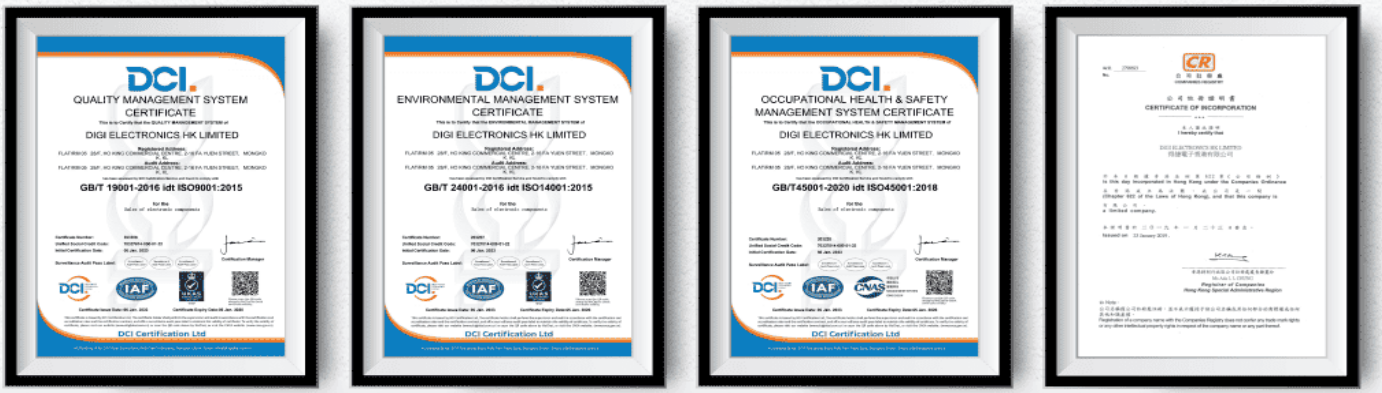

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