

MUN2135, MMUN2135L, MUN5135, DTA123JE, DTA123JM3, NSBA123JF3

Table 1. ORDERING INFORMATION

Device	Part Marking	Package	Shipping†
MMUN2135LT1G, NSVMMUN2135LT1G*	ACA	SOT-23 (Pb-Free)	3000 / Tape & Reel
MUN5135T1G	6M	SC-70/SOT-323 (Pb-Free)	3000 / Tape & Reel

DTA123JET1G

MUN2135, MMUN2135L, MUN5135, DTA123JE, DTA123JM3, NSBA123JF3

Table 2. THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
THERMAL CHARACTERISTICS (SC-59) (MUN2135)			
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	(Note 2) (Note 3) (Note 2) (Note 3)	P_D 230 338 1.8 2.7	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	(Note 2) (Note 3)	$R_{\theta JA}$ 540 370	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead	(Note 2) (Note 3)	$R_{\theta JL}$ 264 287	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
THERMAL CHARACTERISTICS (SOT-23) (MMUN2135L)			
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	(Note 2) (Note 3) (Note 2) (Note 3)	P_D 246 400 2.0 3.2	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	(Note 1) (Note 3)	$R_{\theta JA}$ 508 311	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead	(Note 2) (Note 3)	$R_{\theta JL}$ 174 208	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
THERMAL CHARACTERISTICS (SC-70/SOT-323) (MUN5135)			
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	(Note 2) (Note 3) (Note 2) (Note 3)	P_D 202 310 1.6 2.5	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	(Note 2) (Note 3)	$R_{\theta JA}$ 618 403	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead	(Note 2) (Note 3)	$R_{\theta JL}$ 280 332	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
THERMAL CHARACTERISTICS (SC-75) (DTA123JE)			
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	(Note 2) (Note 3) (Note 2) (Note 3)	P_D 200 300 1.6 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	(Note 2) (Note 3)	$R_{\theta JA}$ 600 400	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
THERMAL CHARACTERISTICS (SOT-723) (DTA123JM3)			
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	(Note 2) (Note 3) (Note 2) (Note 3)	P_D 260 600 2.0 4.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	(Note 2) (Note 3)	$R_{\theta JA}$ 480 205	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

2. FR-4 @ Minimum Pad.

3. FR-4 @ 1.0 x 1.0 Inch Pad.

4. FR-4 @ 100 mm², 1 oz. copper traces, still air.

5. FR-4 @ 500 mm², 1 oz. copper traces, still air.

Table 2. THERMAL CHARACTERISTICS

TYPICAL CHARACTERISTICS
MUN2135, MMUN2135L, MUN5135, DTA123JE, DTA123JM3

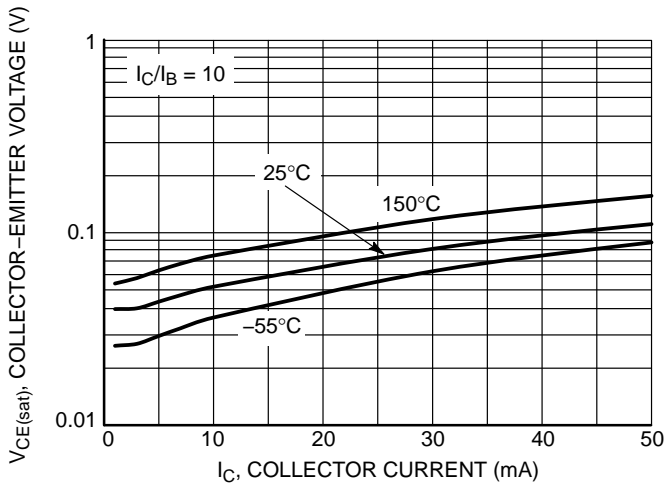


Figure 2. $V_{CE(sat)}$ vs. I_C

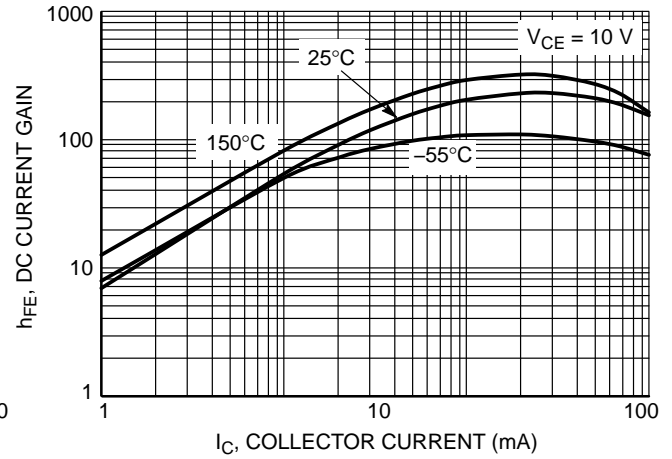


Figure 3. DC Current Gain

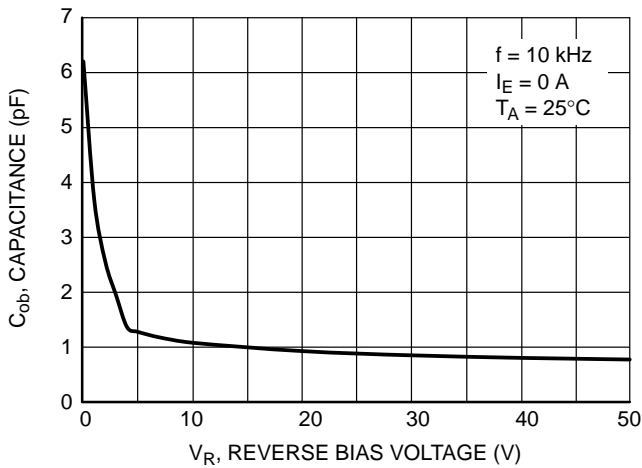


Figure 4. Output Capacitance

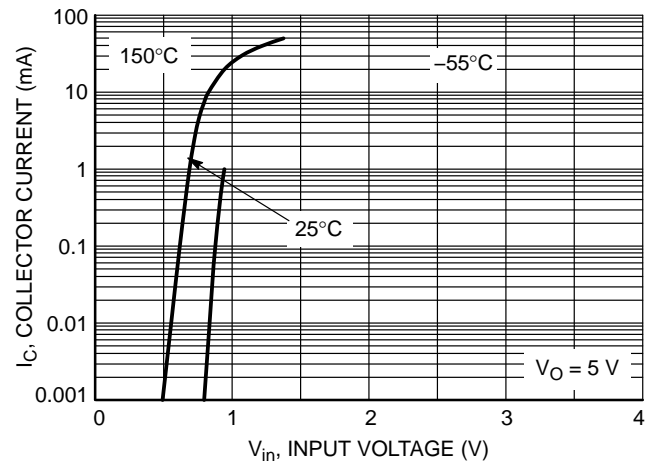


Figure 5. Output Current vs. Input Voltage

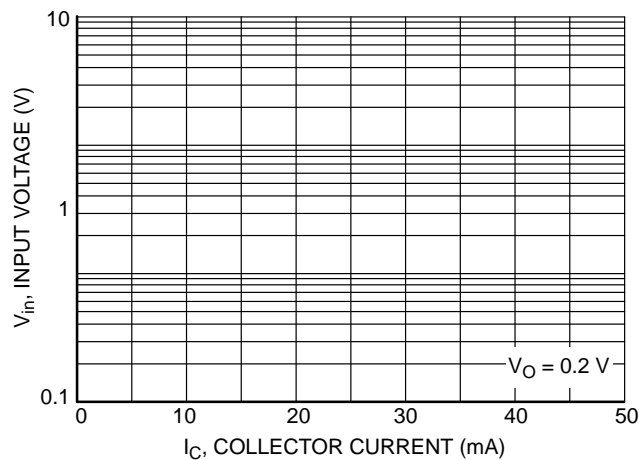
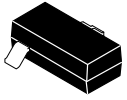


Figure 6. Input Voltage vs. Output Current

MUN2135, MMUN2135L, MUN5135, DTA123JE, DTA123JM3, G30323JMM3,



SCALE 4:1

SOT 23 (TO 236) 2.90x1.30x1.00 1.90P
CASE 318
ISSUE AU

DATE 14 AUG 2024

SOT 23 (TO 236) 2.90x1.30x1.00 1.90P
CASE 318
ISSUE AU

DATE 14 AUG 2024

STYLE 6:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 7:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 8:
PIN 1. ANODE
2. NO CONNECTION
3. CATHODE

STYLE 9:
PIN 1. ANODE
2. ANODE
3. CATHODE

STYLE 10:
PIN 1. DRAIN
2. SOURCE
3. GATE

STYLE 11:
PIN 1. ANODE
2. CATHODE
3. CATHODE-ANODE

STYLE 12:
PIN 1. CATHODE
2. CATHODE
3. ANODE

STYLE 13:
PIN 1. SOURCE
2. DRAIN
3. GATE

STYLE 14:
PIN 1. CATHODE
2. GATE
3. ANODE

STYLE 15:
PIN 1. GATE
2. CATHODE
3. ANODE

STYLE 16:
PIN 1. ANODE
2. CATHODE
3. CATHODE

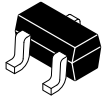
STYLE 17:
PIN 1. NO CONNECTION
2. ANODE
3. CATHODE

STYLE 18:
PIN 1. NO CONNECTION
2. CATHODE
3. ANODE

STYLE 19:
PIN 1. CATHODE
2. ANODE
3. CATHODE-ANODE

STYLE 22:
PIN 1. RETURN
2. OUTPUT
3. INPUT

STYLE 23:
PIN 1. ANODE
2. ANODE
3. CATHODE
3.

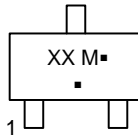


SCALE 4:1

SC-70 (SOT-323)
CASE 419
ISSUE R

DATE 11 OCT 2022

**GENERIC
MARKING DIAGRAM**



- XX = Specific Device Code
- M = Date Code
- = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking.
Pb-

STYLE 1:
CANCELLED

STYLE 2:
PIN 1. ANODE
2. N.C.
3. CATHODE

STYLE 3:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

STYLE 5:
PIN 1. ANODE
2. ANODE
3. CATHODE

STYLE 6:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

STYLE 7:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 8:
PIN 1. GATE
2. SOURCE
3. DRAIN

STYLE 9:
PIN 1. ANODE
2. CATHODE
3. CATHODE-ANODE

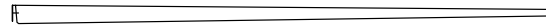
STYLE 10:
PIN 1. CATHODE
2. ANODE
3. ANODE-CATHODE

STYLE 11:
PIN 1. CATHODE
2. CATHODE
3. CATHODE



-

RECOMMEND



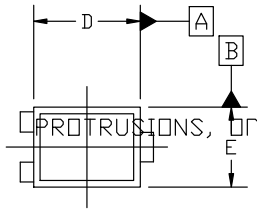


SOT-1123 0.80x0.60x0.37, 0.35P
CASE 524AA
ISSUE D

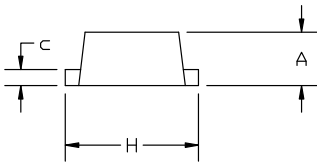
DATE 18 JAN 2024

NOTES:

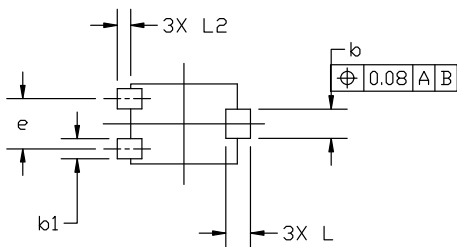
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS, ASH,



TOP VIEW



SIDE VIEW

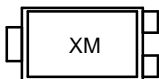


BOTTOM VIEW

← GATE BURRS.

MILLIMETERS			
DIM	MIN	NOM	MAX
A	0.34	0.37	0.40
b	0.15	0.22	0.2
			5
e	0.35	0.38	0.40
H	0.950	1.000	1.050
L	0.185 REF		
L2	0.05	0.10	0.15

GENERIC MARKING DIAGRAM*



- X = Specific Device Code
- M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

RECOMMENDED MOUNTING FOOTPRINT

*

STYLE 1:
 PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

STYLE 2:
 PIN 1. ANODE
 2. N/C
 3. CATHODE

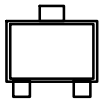
STYLE 3:
 PIN 1. ANODE
 2. ANODE
 3. CATHODE

STYLE 4:
 PIN 1. CATHODE
 2. CATHODE
 3. ANODE

STYLE 5:
 PIN 1. GATE
 2. SOURCE
 3. DRAIN

SOT-723 1.20x0.80x0.50, 0.40P

GENERIC
MARKING



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