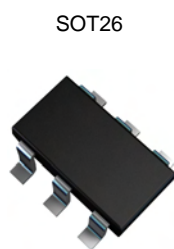


**Features & Benefits**

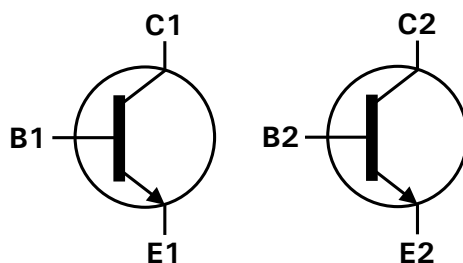
- $BV_{CEO} > 80V$
- $I_{CM} = 1A$  Peak Pulse Current
- General purpose NPN transistors ideally suited for low power amplification and switching applications
- Dual transistors in a single SOT26 package taking half the footprint of two equivalent transistors in SOT23
- Epitaxial planar die construction
- "Lead Free", RoHS Compliant (Note 1)
- Halogen and Antimony Free. "Green" Device (Note 2)
- Qualified to AEC-Q101 Standards for High Reliability

**Mechanical Data**

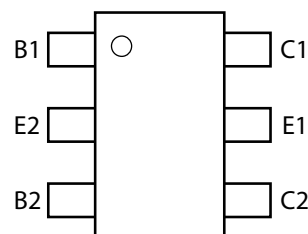
- Case: SOT26
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating: Matte Tin Finish annealed over Copper leadframe
- Weight: 0.015 grams (approximate)



Top View



Device Symbol

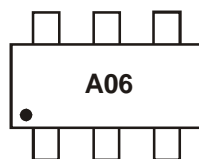


Top View Pin-Out

**Ordering Information** (Note 3)

Product	Marking	Reel size (inches)	Tape width (mm)	Quantity per reel
MMDTA06-7	A06	7	8	3,000

- Notes:
1. No purposefully added lead.
  2. Diodes Inc's "Green" Policy can be found on our website at <http://www.diodes.com>
  3. For packaging details, go to our website at <http://www.diodes.com>

**Marking Information**


A06 = Product Type Marking Code

**Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

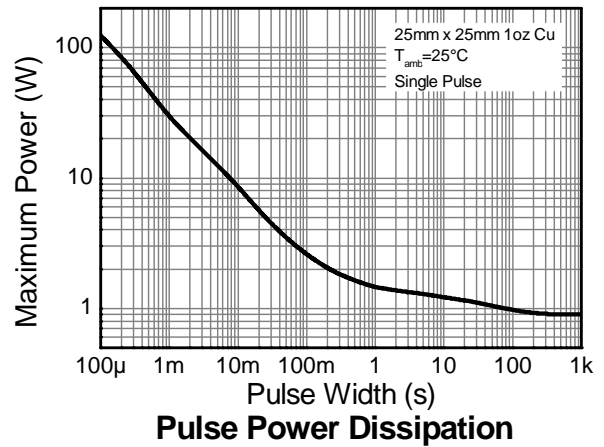
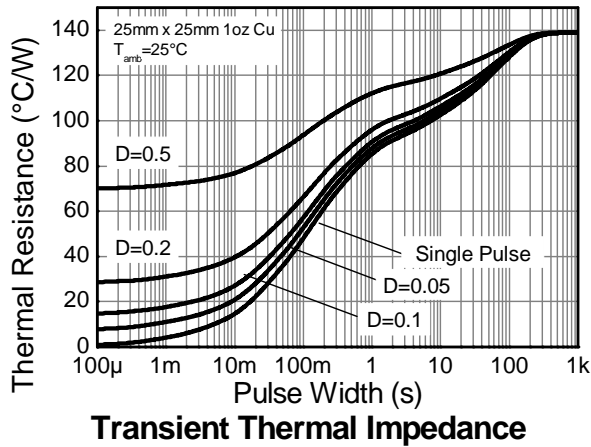
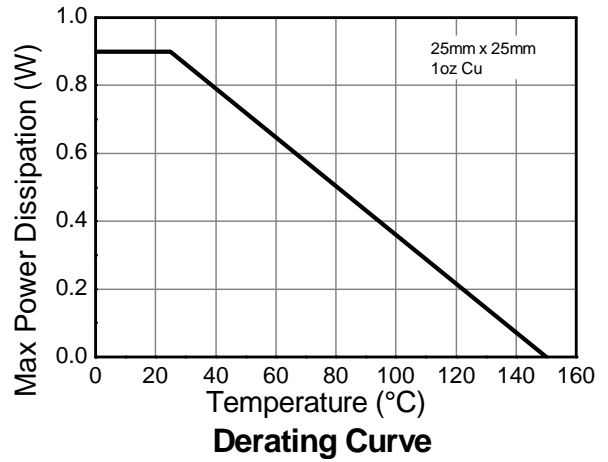
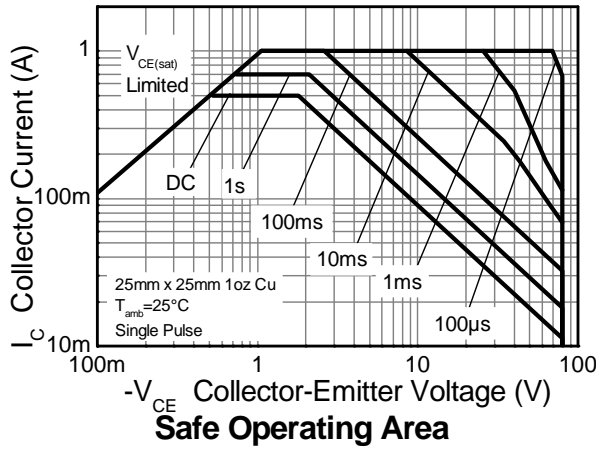
Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CBO</sub>	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	80	V
Emitter-Base Voltage	V <sub>EBO</sub>	4	V
Continuous Collector Current	I <sub>C</sub>	500	mA
Peak Pulse Collector Current	I <sub>CM</sub>	1	A

**Thermal Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation Linear Derating Factor	P <sub>D</sub>	1.28	W
		10.3	
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	0.90	mW/°C
		7.14	
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	97	°C/W
		140	
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

- Notes:
4. For a device surface mounted on 25mm x 25mm x 1.6mm FR4 PCB with high coverage of single sided 1oz copper, in still air conditions; the device is measured when operating in a steady-state condition.
  5. Same as note (4), except the device is measured at t ≤ 5 sec.
  6. For a dual device with one active die.
  7. Thermal resistance from junction to solder-point (at the end of the collector lead).

**Thermal Characteristics**

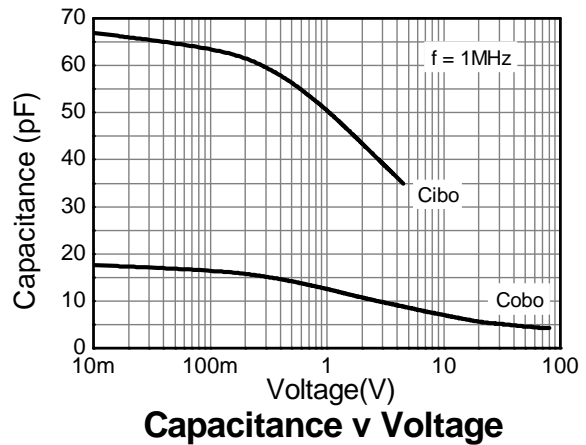
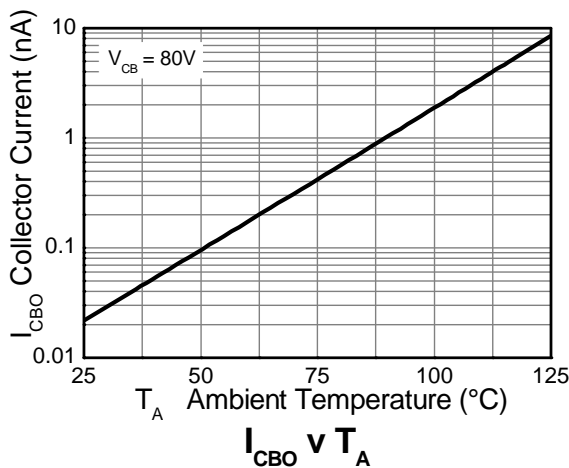
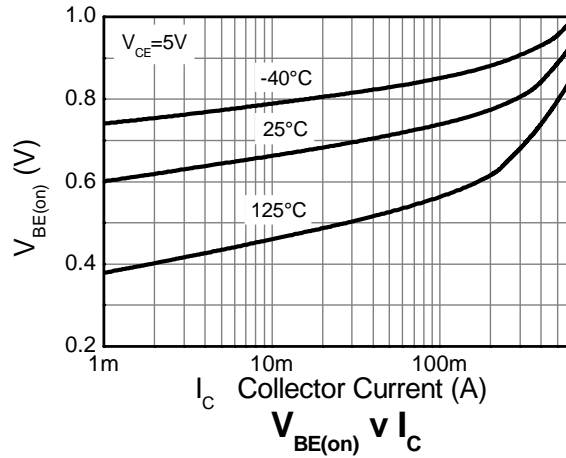
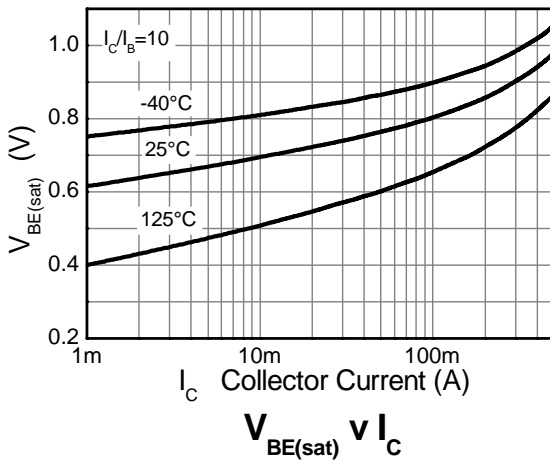
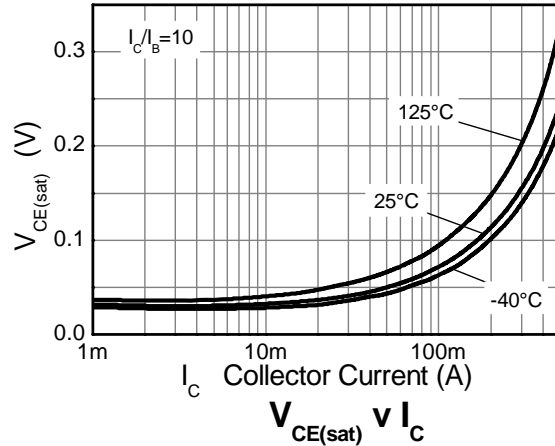
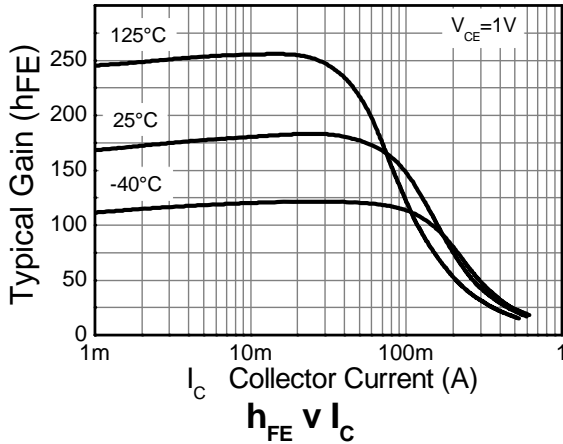


**Electrical Characteristics** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

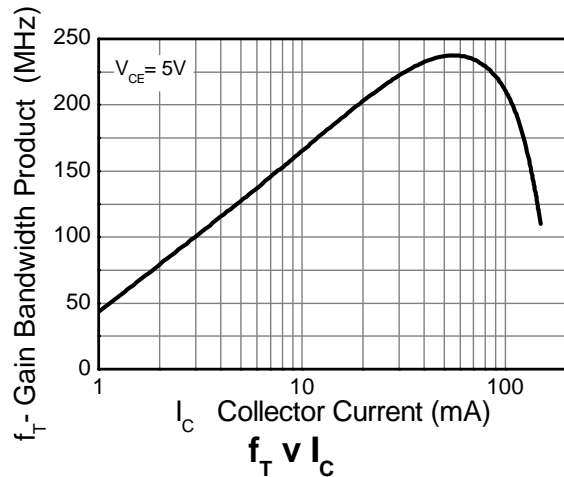
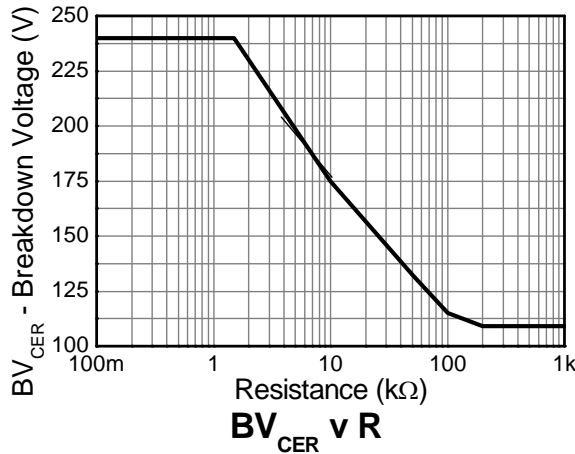
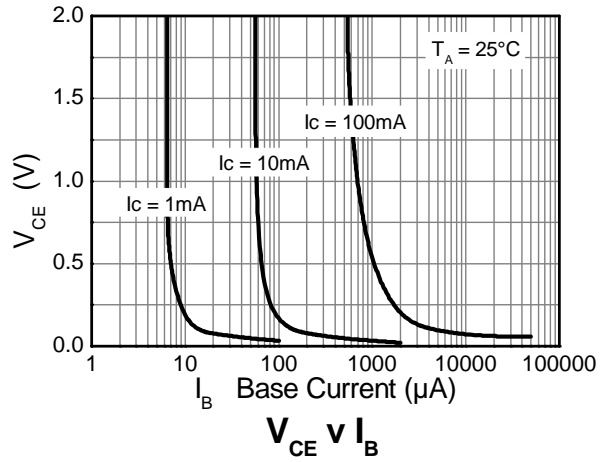
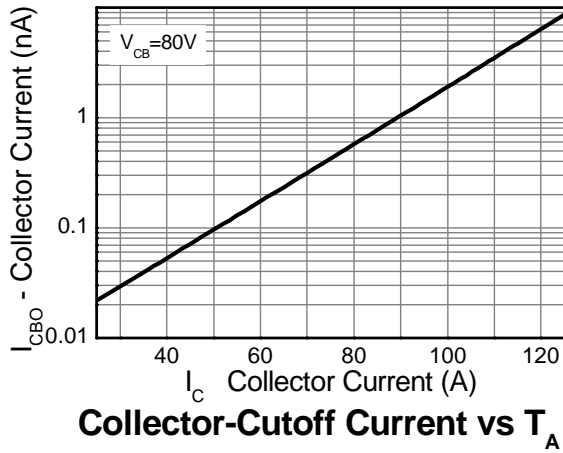
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
<b>OFF CHARACTERISTICS</b>						
Collector-Base Breakdown Voltage	$BV_{CBO}$	80	—	—	V	$I_C = 100\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage (Note 8)	$BV_{CEO}$	80	—	—	V	$I_C = 1\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$BV_{EBO}$	4	—	—	V	$I_E = 100\mu\text{A}, I_C = 0$
Collector-Base Cutoff Current	$I_{CBO}$	—	—	100	nA	$V_{CB} = 80\text{V}, I_E = 0$
Collector-Emitter Cutoff Current	$I_{CES}$	—	—	100	nA	$V_{CE} = 60\text{V}, I_B = 0$
<b>ON CHARACTERISTICS (Note 8)</b>						
DC Current Gain	$h_{FE}$	100	—	—	—	$I_C = 10\text{mA}, V_{CE} = 1\text{V}$
		100	—	—		$I_C = 100\text{mA}, V_{CE} = 1\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	—	—	0.25	V	$I_C = 100\text{mA}, I_B = 10\text{mA}$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	—	—	1.20	V	$I_C = 100\text{mA}, V_{CE} = 1\text{V}$
<b>SMALL SIGNAL CHARACTERISTICS</b>						
Current Gain-Bandwidth Product	$f_T$	100	163	—	MHz	$V_{CE} = 2\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$
Output Capacitance	$C_{obo}$	—	7	—	pF	$V_{CB} = 10\text{V}, f = 1\text{MHz}$

Note: 8. Measured under pulsed conditions. Pulse width  $\leq 300\mu\text{s}$ . Duty cycle  $\leq 2\%$ .

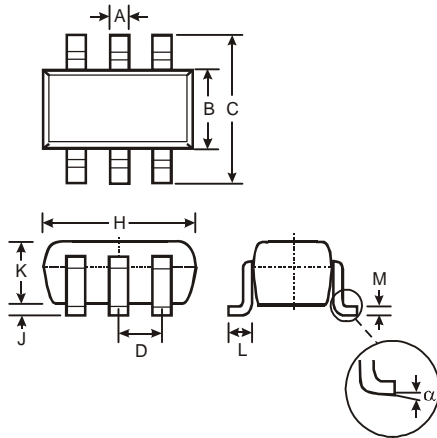
**Typical Electrical Characteristics**



**Typical Electrical Characteristics - Continued**

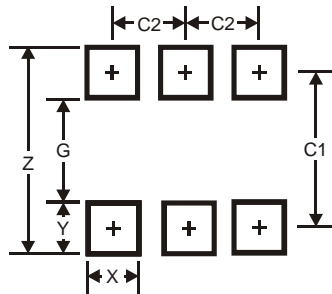


**Package Outline Dimensions**



SOT26			
Dim	Min	Max	Typ
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	—	—	0.95
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
$\alpha$	0°	8°	—
All Dimensions in mm			

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	3.20
G	1.60
X	0.55
Y	0.80
C1	2.40
C2	0.95

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**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331