



# New Product Announcement

MJD2873Q  
MJD31CHQ  
MJD41CQ  
MJD42CQ

## 50V and 100V, TO252 (DPAK) Automotive-Compliant Bipolar Power Transistors

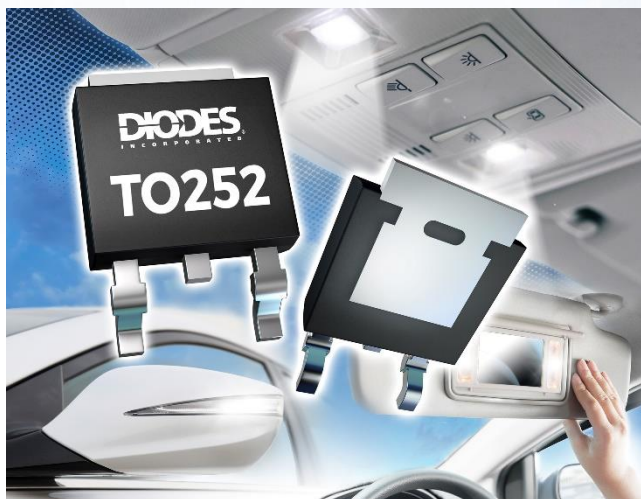
Expanding the MJD series portfolio are four automotive-compliant bipolar power transistors:

- MJD2873Q NPN 50V 2A
- MJD31CHQ NPN 100V 3A
- MJD41CQ NPN 100V 6A
- MJD42CQ PNP -100V 6A

These devices suit a wide range of automotive applications and circuit functions such as power management and linear voltage regulation.

Additionally, the MJD41CQ and MJD42CQ are ideal for designs requiring complementary pairs, such as for general-purpose amplification applications.

The thermally efficient heat dissipation, provided by the TO252 (DPAK) package, contributes to improved heat management, enabling more reliable system performance.



### The DIODES Advantage

The MJD series provides designers with additional voltage-current options in the robust TO252 (DPAK) package.

- **General Purpose Power Transistor**  
Designers go-to device for a wide range of applications
- **Thermally-Efficient TO252 (DPAK) Package**  
Reduced operating temperature
- **Automotive-Compliant**
  - Qualified to AECQ-101
  - PPAP Capable
  - Manufactured in IATF 16949:6 certified facilities

### Automotive Applications

- Automotive LED lighting
- Motor controls
- Linear voltage regulation
- Power management
- General-purpose amplifiers
- Linear controllers

*Automotive-compliant – AEC-Q101 qualified in IATF 16949 certified manufacturing sites and supports PPAP documentation.*

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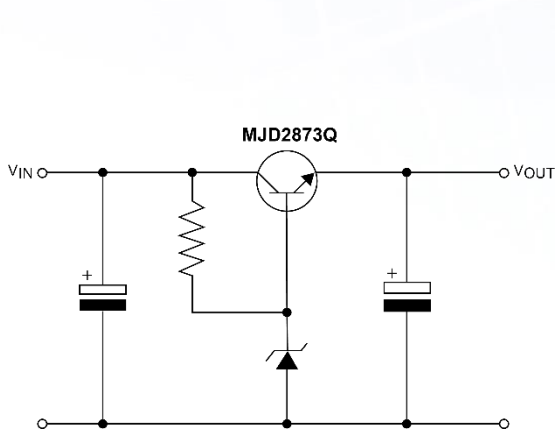
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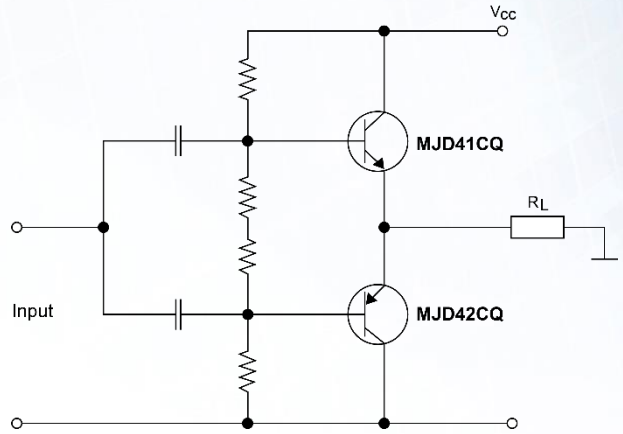
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## Typical Applications



**Linear Voltage Regulator**



**Class-B Amplifier**

## Product Portfolio

Part Number	Type	$V_{CEO}$	$I_C$	$I_{CM}$	$P_D$	$h_{FE}$ Min	$I_C$	$h_{FE}$ Min	$I_{C2}$	$V_{CE(sat)}$ Max	$V_{CE(sat)}$ Condition		$F_T$ Min
		V	A	A	W		A		A	V	$I_C$ (A)	$I_B$ (mA)	MHz
<a href="#">MJD2873Q</a>	NPN	50	2	3	2.6	40	2	80	0.75	0.3	1	50	65
<a href="#">MJD31CHQ</a>	NPN	100	3	5	2.6	10	3	25	1	1.2	3	375	3
<a href="#">MJD41CQ</a>	NPN	100	6	10	2.7	15	3	30	0.3	1.5	6	600	3
<a href="#">MJD42CQ</a>	PNP	-100	-6	-10	2.7	15	-3	30	-0.3	-1.5	-6	-600	3

## Competitor Product Cross Reference

Electrically similar to other MJD series products

Diodes Incorporated	Nexperia	Onsemi	Compatibility
<a href="#">MJD2873Q-13</a>	MJD2873-Q	-	PP
<a href="#">MJD31CHQ-13</a>	MJD31CH-Q	NJVMJD31CT4G	PP
<a href="#">MJD41CQ-13</a>	MJD41C-Q	NJVMJD41CT4G	PP
<a href="#">MJD42CQ-13</a>	MJD42C-Q	NJVMJD42CT4G	PP

PP = Pin-to-Pin Replacement



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**MJD41CQ**  
**MJD42CQ**

## Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
<a href="#">MJD2873Q-13</a>	<a href="#">Automotive</a>	TO252 (DPAK)	MSL-1	2,500	13" Reel
<a href="#">MJD31CHQ-13</a>	<a href="#">Automotive</a>	TO252 (DPAK)	MSL-1	2,500	13" Reel
<a href="#">MJD41CQ-13</a>	<a href="#">Automotive</a>	TO252 (DPAK)	MSL-1	2,500	13" Reel
<a href="#">MJD42CQ-13</a>	<a href="#">Automotive</a>	TO252 (DPAK)	MSL-1	2,500	13" Reel