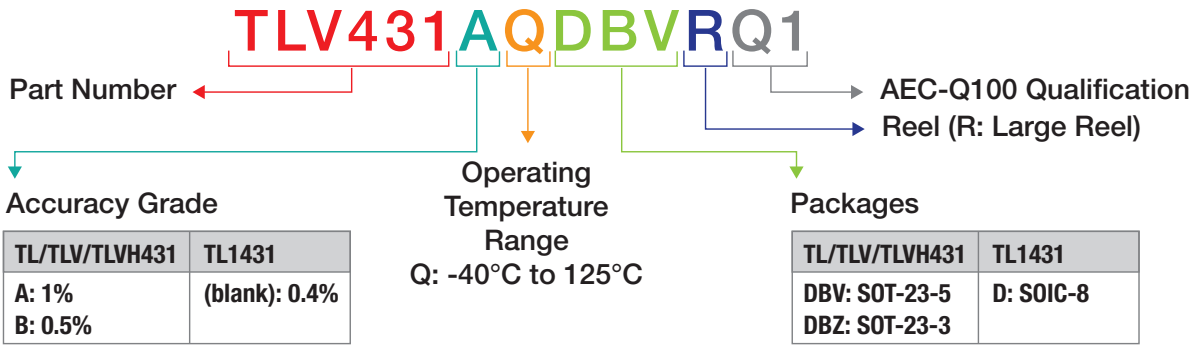
431-Q1 Device Nomenclature

TEXAS INSTRUMENTS



TL/TLV/TLVH431	TL1431
A: 1% B: 0.5%	(blank): 0.4%

TL/TLV/TLVH431	TL1431
DBV: SOT-23-5 DBZ: SOT-23-3	D: SOIC-8

431-Q1 Family of Devices

Device	V_{REF} (typ)	V_{KA} (max)	I_{KA} (min)	I_{KA} (max)	I_{REF} (max)	$I_{I(dev)}$ (max)	Temp Drift (ppm/°C)	Voltage Options (V_O)			Initial Accuracy Grade (%)			I_Q	Pkg.	Notes
								Adj.	1.225	2.5	Standard	A	B			
TL431LIA/B-Q1	2.5V	36V	1mA	15mA	0.4µA	0.3µA	66	to 36V		✓		1	0.5	1mA	SOT23-3	
TL432LIA/B-Q1	2.5V	36V	1mA	15mA	0.4µA	0.3µA	66	to 36V		✓		1	0.5	1mA	SOT23-3	
ATL431LIA/B-Q1	2.5V	36V	100µA	15mA	0.4µA	0.3µA	66	to 36V		✓		1	0.5	0.08mA	SOT23-3	
ATL432LIA/B-Q1	2.5V	36V	100µA	15mA	0.4µA	0.3µA	66	to 36V		✓		1	0.5	0.08mA	SOT23-3	
TL1431-Q1	2.5V	36V	1mA	100mA	4µA	2µA	133	to 36V		✓	0.4			1mA	SOIC-8	
TL431A/B-Q1	2.49V	36V	1mA	100mA	4µA	2.5µA	83	to 36V		✓		1	0.5	0.7mA	SOT23-3 SOT23-5	B-grade only offered in SOT23-3
TL432A/B-Q1	2.49V	36V	1mA	100mA	4µA	2.5µA	83	to 36V	✓			1	0.5	0.7mA	SOT23-3	
TLV431A/B-Q1	1.24V	6V	100µA	15mA	0.5µA	0.5µA	151	to 6V	✓			1	0.5	100µA	SOT23-3 SOT23-5	A-grade only offered in SOT23-5
TLVH431A/B-Q1	1.24V	18V	100µA	70mA	0.5µA	0.5µA	151	to 18V		✓		1	0.5	100µA	SOT23-3 SOT23-5	A-grade only offered in SOT23-5

Design Resources

- Automotive LED Lighting with Adjustable Shunt References
- Using the TL431 as a Voltage Comparator
- Setting the Shunt Voltage on a Shunt Regulator
- Understanding Stability Boundary Conditions for TL431
- Flyback Compensation Network Design for TL431

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