

BUK7880-55

N-channel TrenchMOS standard level FET

Devices listed on this page should not be used for new designs!

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Direct downloads

- Datasheet (pdf)
- All application notes (zip)
- All documentation (zip)

All documents (21)

Standard level N-channel enhancement mode Field-Effect Transistor (FET) in a plastic package using TrenchMOS technology. This product has been designed and qualified to the appropriate AEC standard for use in automotive critical applications.

Features and benefits

- AEC Q101 compliant
- Electrostatically robust due to integrated protection diodes
- Low conduction losses due to low on-state resistance

Recommended replacement: BUK7880-55A

Parametric search

Quick ordering

BUK7880-55/CUF

Region:

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Parameters of this product

Symbol	Parameter	Conditions	Min	Typ.Nom	Max	Unit
V _{DS}	drain-source voltage	T _j ≥ 25 °C; T _j ≤ 150 °C			55	V
I _D	drain current	T _{sp} = 25 °C			7.5	A
P _{tot}	total power dissipation	T _{sp} = 25 °C			8.3	W
Static characteristics						
R _{DS(on)}	drain-source on-state resistance	V _{GS} = 10 V; I _D = 5 A; T _j = 25 °C		65	80	mΩ
Avalanche ruggedness						
E _{DS(ALS)}	non-repetitive drain-source avalanche energy	I _D = 2.5 A; V _{sup} = 25 V; R _{GS} = 50 Ω; V _{GS} = 10 V; T _{j(initial)} = 25 °C; unclamped			30	mJ

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Package

Type number	Package	Outline version	Reflow-Wave soldering	Packing	Product status	Marking	Orderable part number, (Ordering code (12NC))
BUK7880-55/CU	SC-73 (SOT223)	↓ sot223_po	↓ sot223_fr ↓ sot223_fw	↓ Reel 11 1/2" Q1/T1 in LargePack	Active	xxYWW 78055	BUK7880-55/CUF (9340 682 82135)

The variants in the table below are discontinued. See the table Discontinuation information at the bottom of this page for more information.

Type number	Package	Outline version	Reflow-Wave soldering	Packing	Product status	Marking	Orderable part number, (Ordering code (12NC))
BUK7880-55	SC-73 (SOT223)	↓ sot223_po	↓ sot223_fr ↓ sot223_fw	↓ Reel 11 1/2" Q1/T1 in LargePack	Discontinued Replacement product	Standard Marking	BUK7880-55,135 (9340 505 20135)

Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	G	gate		
2	D	drain		
3	S	source		
4	D	mounting base; connected to drain		

Discontinuation information

Type number	Ordering code (12NC)	Last-time buy date	Last-time delivery date	Replacement product	DN Notice	Status	Comments
BUK7880-55	934050520135	31-Dec-15	30-Jun-16	BUK7880-55/CU	DN NXP-DN_201506035DN	Version withdrawal	Gold Parts replaced with Copper Wire

Quality, reliability & chemical content

Type number	Orderable part number	Chemical content	RoHS / RHF	Leadfree conversion date	MSL	MSL LF
BUK7880-55/CU	BUK7880-55/CUF	BUK7880-55/CU		Always Pb-free	1	1

The variants in the table below are discontinued. See the table Discontinuation information at the bottom of this page for more information.

Type number	Orderable part number	Chemical content	RoHS / RHF	Leadfree conversion date	MSL	MSL LF
BUK7880-55	BUK7880-55,135	BUK7880-55		week 35, 2003	1	1

Quality and reliability disclaimer

Discontinuation information

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BUK7880-55	934050520135	31-Dec-15	30-Jun-16	BUK7880-55/CU	DN NXP-DN_201506035DN	Version withdrawal	Gold Parts replaced with Copper Wire

Documentation for this product

Download all documentation (zip)

File name	Title	Type	Format	Date
BUK7880-55	N-channel TrenchMOS standard level FET	Data sheet	pdf	2011-04-21
AN10273	Power MOSFET single-shot and repetitive avalanche ruggedness rating	Application note	pdf	2010-03-17
AN10874	LPAK MOSFET thermal design guide	Application note	pdf	2011-01-27
AN11113	LPAK MOSFET thermal design guide - Part 2	Application note	pdf	2011-11-16
AN11158	Understanding power MOSFET data sheet parameters	Application note	pdf	2014-02-04
AN11160	Designing RC Snubbers	Application note	pdf	2012-10-01
AN11156	Using Power MOSFET Zth Curves	Application note	pdf	2012-10-10
AN11243	Failure signature of Electrical Overstress on Power MOSFETs	Application note	pdf	2012-10-29
AN11261	Using RC Thermal Models	Application note	pdf	2014-05-19
AN11599	Using power MOSFETs in parallel	Application note	pdf	2015-07-07
75017631	Discretes Semiconductors Selection Guide 2015	Selection guide	pdf	2015-01-09
TN00008	Power MOSFET frequently asked questions and answers	Technical note	pdf	2015-08-07
sot223_fr	Footprint for reflow soldering SOT223	Reflow soldering	pdf	2009-10-08
sot223_fw	Footprint for wave soldering SOT223	Wave soldering	pdf	2010-07-13
sot223_po	Footprint surface-mounted package with increased heatsink; 4 leads	Outline drawing	pdf	2009-10-08
SOT223_135	Tape reel BMD; standard product orientation 12NC ending 135	Packing	pdf	2012-11-07
Reflow_Soldering_Profile	Reflow Soldering Profile	Reflow soldering	pdf	2013-09-30
Wave_Soldering_Profile	Wave Soldering Profile	Wave soldering	pdf	2013-09-30

Ordering & availability

Type number	Ordering code (12NC)	Orderable part number	Region	Distributor	In stock	Order quantity	Inventory date	Buy online	Samples
BUK7880-55/CU	9340 682 82135	BUK7880-55/CUF							Order samples

Sample
 Sample orders normally take 2-4 days for delivery.
 If you do not have a direct contact with NXP our network of global and regional distributors is available and equipped to support you with NXP samples. As a NXP customer you also have the option to order samples via our sales organisation.

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