



IRHiRel Schottky Diodes and Ultra-Fast Rectifiers Product Selection Guide

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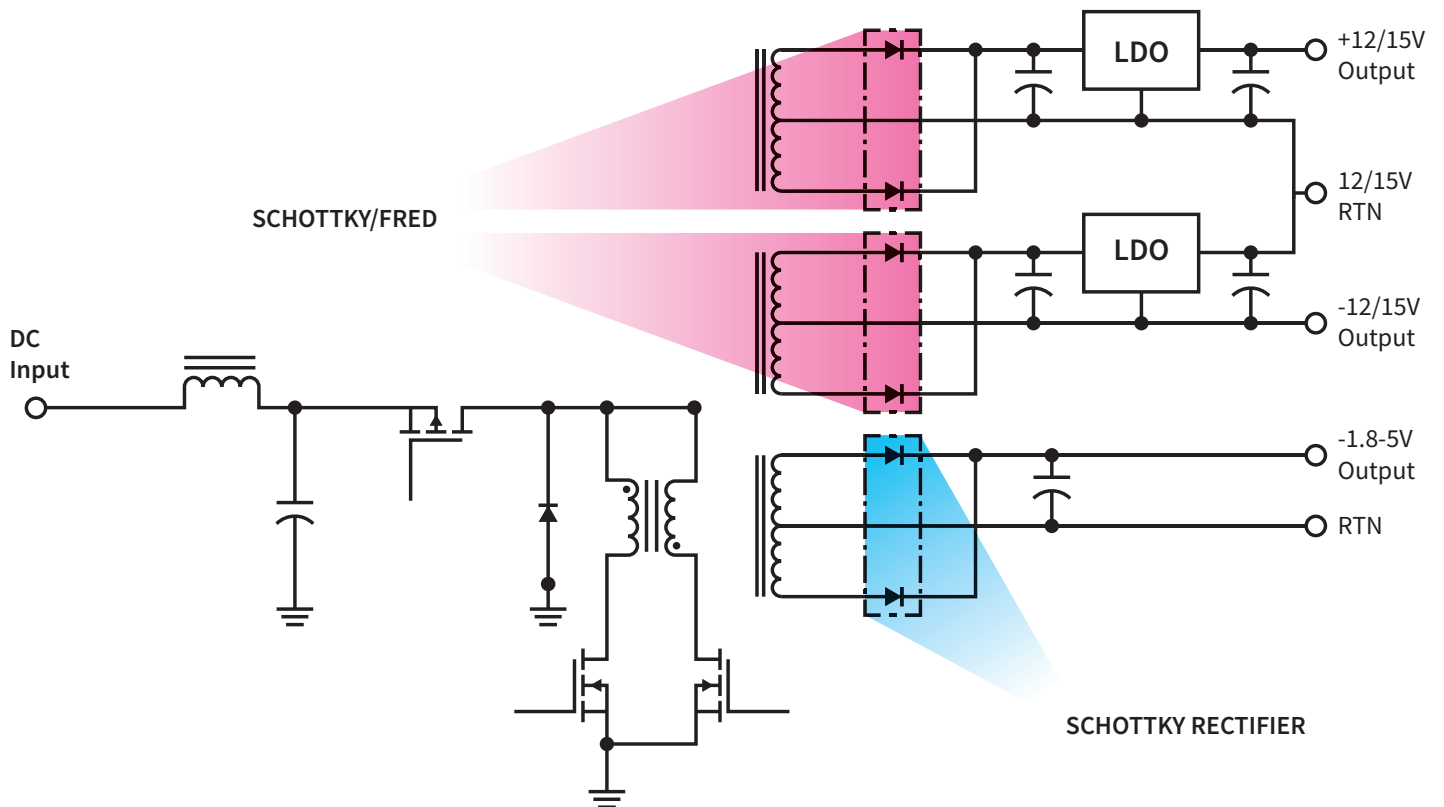
IOR HiRel
An Infineon Technologies Company

Introduction

The latest rectifier products are now available from the world's most reliable source of power semiconductors. Whether your requirement is in the output rectification, circuit isolation, or free-wheeling design application, these new series of Schottky and high voltage ultra-fast recovery rectifiers are intended to provide the high circuit efficiency, excellent dynamic performance and unparalleled reliability our customers are accustomed to with our products. The products are available in a choice of hermetic packages with years of excellent reliability records.

IRHiRel Schottky Diodes and Ultra-Fast Rectifiers are offered with the following screening and QCI levels based on the DoD Department of Logistics (DLA) MIL-PRF-19500:

1. Commercial off the shelf (COTS) with no QCI
2. Source Control Drawing (SCD)
3. IRHiRel's Qualified IR List (QIRL) with TX, TXV and S level equivalent to MIL-PRF-19500 screenings, manufactured and tested on the same production line with the same flow as MIL-PRF-19500 DLA approved line. QIRL part numbers have SCX, SCV, SCS suffix respectively.
4. DLA approved Qualified Product List (QPL) with TX, TXV, and S level screenings to MIL-PRF-19500 sold under military part number starting with JAN under DLA approved slash sheet.



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Schottky Diodes

Single Device

Part Number	DLA Qualified	JEDEC Part Number	VR (V)	IF(AV) (A)	@ TC	VF @ IF @ 25°C	VF @ IF @ 125C	Rth(JC)
18-pin LCC								
8EQ045			45	10	100	0.65	0.58	6
5EQ100			100	8	100	0.8	0.65	6
D2								
16SYQ045C			45	16	117	0.56	0.52	1.15
SMD-0.5								
30SLJQ030	QP	1N7078U3	30	30	105	0.62	0.57	1.6
30LJQ045			45	30	107	0.71	0.66	1.6
30SLJQ045			45	30	97	0.75	0.74	1.6
30SLJQ060			60	30	70	0.92	0.96	2
15LJQ100	QPL	1N6844U3	100	15	100	0.91	0.72	2.25
30LJQ100			100	30	88	1.04	0.82	2
30LJQ150	QPL	1N7038U3	150	30	84	1.18	0.92	1.82
SMD-1								
75SLQ030			30	75	82	0.59	0.51	1.1
120LQ045			45	120	64	0.99	1.07	0.8
60LQ045			45	60	105	0.68	0.6	0.5
75SLQ045			45	75	78	0.64	0.61	1.1
75SLQ060			60	75	74	0.82	0.7	1.1
120LQ100			100	120	58	0.94	0.74	0.8
60LQ100			100	60	102	0.95	0.7	1.1
75LQ150			150	75	108	1.06	0.78	0.75
TO-254AA								
35SGQ030			30	35	100	0.7	0.69	1.1
25GQ045			45	35	100	0.93	0.84	1
35SGQ045			45	35	99	0.75	0.79	1.1
35SGQ060			60	35	79	0.83	0.92	1.1
22GQ100			100	30	100	1.1	0.9	1
35GQ100	QPL	1N7069T1	100	35	91	1.05	1	1.1
35GQ150			150	35	100	1	0.9	1.1
16SYQ030C			30	16	134	0.55	0.43	1.1
TO-257AA								
10YQ045			45	10	109	0.73	0.7	2.6
10YQ045C	QPL	1N7045T3	45	10	109	0.73	0.7	2.6
16SYQ045C			45	16	117	0.56	0.52	1.1
16YQ045C			45	16	133	0.65	0.61	1.1
16SYQ060C			60	16	125	0.65	0.63	1.1
16YQ100C			100	16	132	0.785(15A)	0.71(15A)	1.1
16YQ150C			150	16	124	0.97	0.87	1.25

Common Cathode

Part Number	DLA Qualified	JEDEC Part Number	VR (V)	IF(AV) (A)	@ TC	VF @ IF @ 25°C	VF @ IF @ 125C	Rth(JC)
SMD-0.5								
30SCLJQ030			30	30	80	0.61	0.55	1.75
30CLJQ045	QPL	1N7064CCU3	45	30	87	0.8	0.72	1.75
30SCLJQ045			45	30	105	0.7	0.69	1.75
8CLJQ045			45	8.5	100	0.67(4A)	0.58(4A)	3.73
30SCLJQ060			60	30	77	0.9	0.78	1.75
30CLJQ100	QPL	1N6843CCU3	100	30	84	1.03	0.77	1.75
30CLJQ150	QPL	1N7058CCU3	150	30	72	1.2	0.85	1.75
SMD-1								
80SCLQ030			30	80	92	0.56	0.55	0.63
20CLQ045	QPL	1N7041CCU1	45	20	100	0.57	0.48	1.2
35CLQ045			45	35	107	0.63(20A)	0.57(20A)	0.7
80SCLQ045			45	80	84	0.63	0.62	0.63
80SCLQ060			60	80	102	0.68	0.64	0.63
15CLQ100	QPL	1N7037CCU1	100	15	100	0.67(5A)	0.53(5A)	1.2
90CLQ100			100	90	69	0.98(40A)	0.81(40A)	0.63
12CLQ150	QPL	1N7039CCU1	150	35	100	1.13(15A)	0.86(15A)	0.83
80CLQ150			150	80	94	0.96	0.84	0.63
TO-254AA								
35SCGQ030			30	35	108	0.59	0.53	0.63
22CGQ045	QPL	1N6660CCT1	45	35	100	0.75(20A)	0.7(20A)	0.625
35CGQ045			45	35	114	0.68	0.65	0.7
35SCGQ045			45	35	116	0.54(15A)	0.47(15A)	0.63
35SCGQ060			60	35	113	0.61	0.61	0.63
15CGQ100	QPL	1N7043CCT1	100	35	100	0.89(15A)	0.85(15A)	0.83
35CGQ100	QPL	1N7062CCT1	100	35	113	0.79(15A)	0.71(15A)	0.63
12CGQ150	QPL	1N7039CCT1	150	35	100	1.13(15A)	0.86(15A)	0.83
35CGQ150			150	35	115	0.93	0.8	0.63
TO-257AA								
16SCYQ030C			30	16	138	0.48(7.5A)	0.33(7.5A)	0.8
16CYQ045C			45	16	136	0.57	0.49	0.8
16SCYQ045C			45	16	134	0.5	0.42	0.8
16SCYQ060C			60	16	127	0.58	0.55	1
16CYQ100C	QPL	1N7070CCT3	100	16	131	0.75	0.63	1
16CYQ150C	QPL	1N7047CCT3	150	16	132	0.91	0.73	0.84
TO-258AA								
60CKQ045	QPL	1N7071CCT8	45	45	124	0.71(25A)	0.62(25A)	0.42
45CKQ100			100	45	100	0.89(25A)	0.74(25A)	0.42
TO-259AA								
45CIQ100			100	45	100	0.89(25A)	0.74(25A)	0.42

Ultra-Fast Diodes

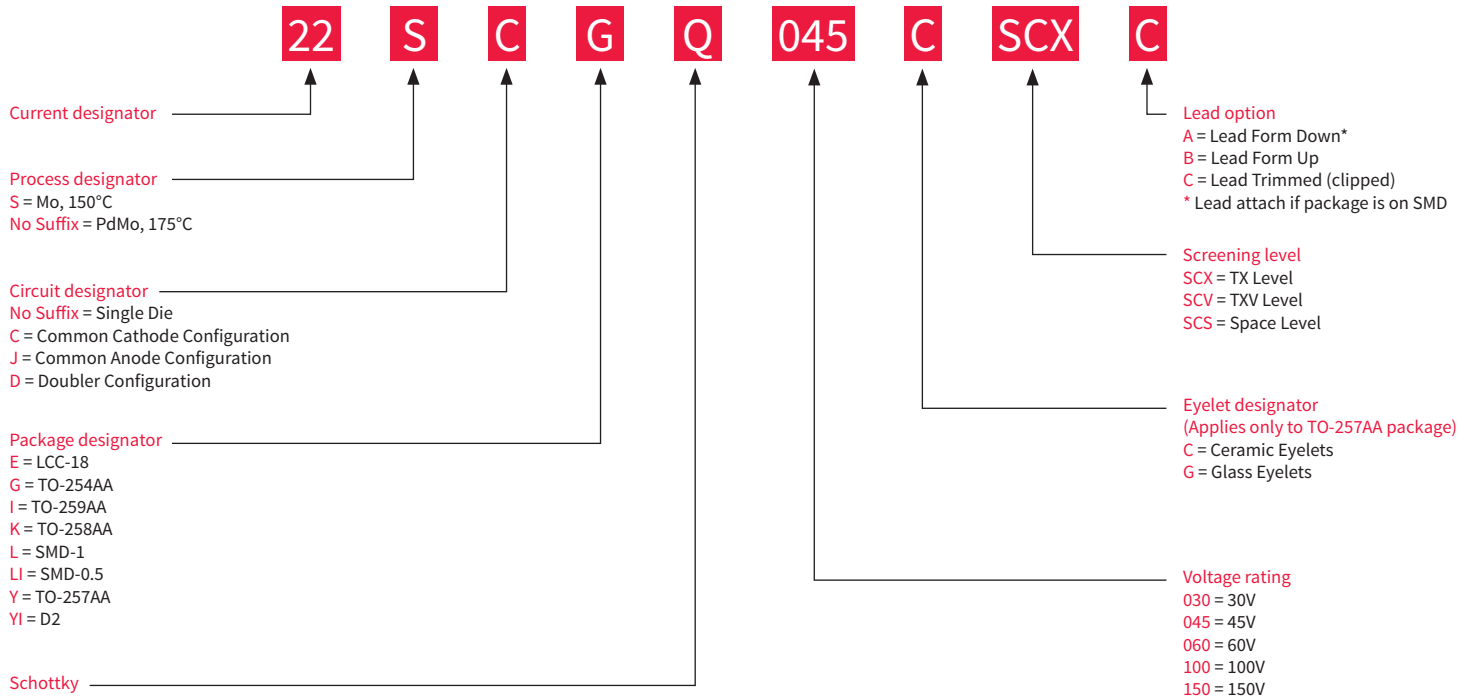
Single Device

Part Number	VR (V)	IF(AV) (A)	@ TC	VFM @ IF (V)	IR @VR (μA)	Rth(JC)
SMD-0.5						
HFB25HJ20	200	25	106	1.18	10	1.76
SMD-1						
HFA40HF120	1200	11	100	3.1	10	1.5
HFA40HF60	600	22	100	1.75	10	1.5
HFB60HF20	200	60	55	1.13	50	1.76
TO-254AA						
HFA35HB120	1200	11	100	3.1	10	1.5
HFA35HB60	600	22	100	1.75	10	1.5
HFB35HB20	200	35	80	1.15	10	1
TO-257AA						
HFB16HY20C	200	16	120	1.17	1	1.25
TO-258AA						
HFB50HC20	200	50	87	1.28	0.07	0.75
TO-259AA						
HFB50HI20	200	50	87	1.28	0.07	0.75

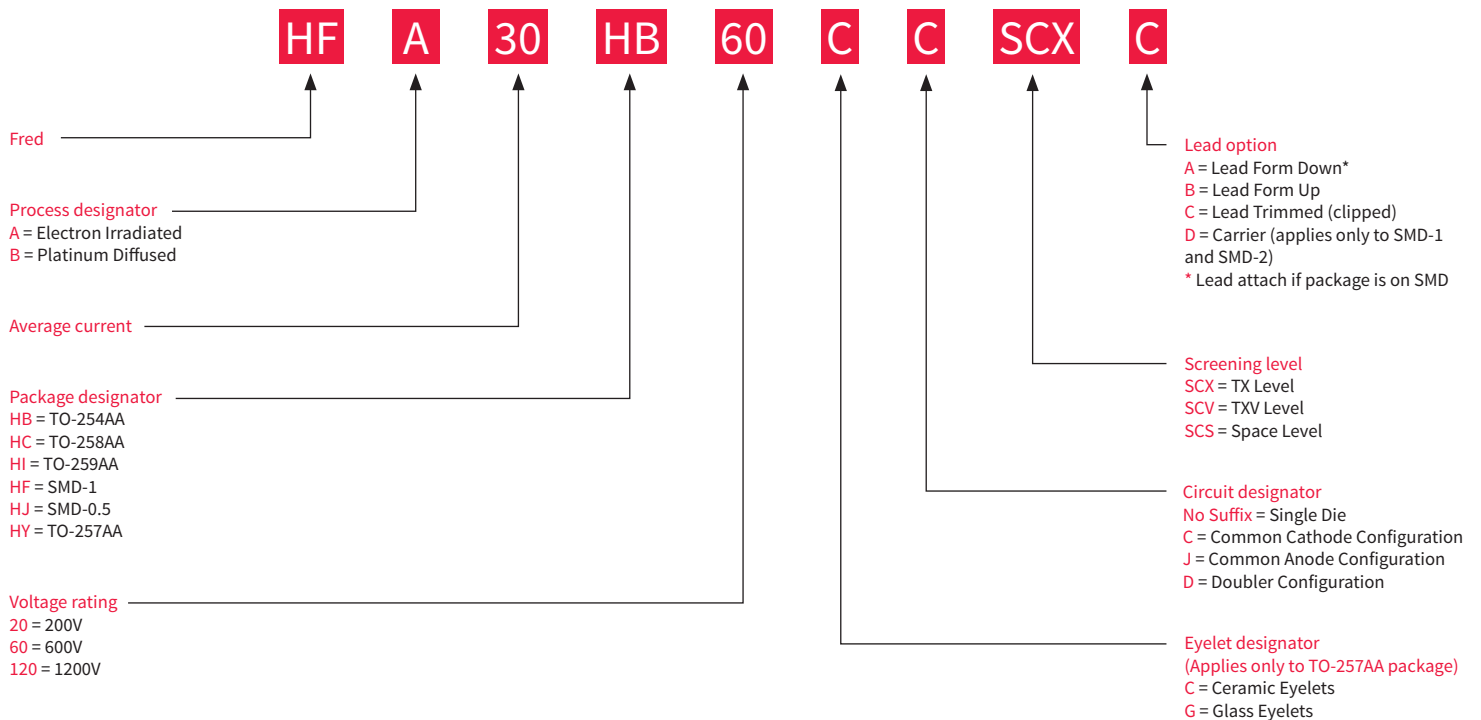
Common Cathode

Part Number	VR (V)	IF(AV) (A)	@ TC	VFM @ IF (V)	IR @VR (μA)	Rth(JC)
SMD-0.5						
HFB20HJ20C	200	20	85	1.3	10	4.5
SMD-1						
HFA40HF120C	1200	15	100	3.3	10	2
HFA40HF60C	600	30	100	1.56	10	2
HFB60HF20C	200	60	50	1.25	10	2.73
TO-254AA						
HFA35HB120C	1200	15	100	4.4	10	2
HFA35HB60C	600	30	100	1.92	10	2
HFB35HB20C	200	35	108	1.4	50	1.4
TO-257AA						
HFB16HY20CC	200	16	132	1.15	1	1.49
TO-258AA						
HFA45HC120C	1200	28	100	3.9	20	1.2
HFA45HC60C	600	45	100	2	10	1.2
HFB50HC20C	200	50	107	1.49	1	0.96
TO-259AA						
HFA45HI120C	1200	28	100	3.9	20	1.2
HFA45HI60C	600	45	100	2	10	1.2
HFB50HI20C	200	50	100	1.54	1	0.96

Schottky Diodes Nomenclature



Ultra-fast Diodes Nomenclature



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- > Germany 0800 951 951 951 (German/English)
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- > India 000 800 4402 951 (English)
- > USA 1-866 951 9519 (English/German)
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